

The Effects of a Combined Conflict Resolution-Mindfulness Intervention on the
Positive Peer Interactions of Primary School Aged Children

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by

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Abstract

Research suggests that pro-social skills and self-regulatory abilities are necessary for healthy child development and are prerequisites for interacting in the school classroom in ways that avoid disruption and distress. Children without pro-social skills struggle to engage in positive social interaction with peers and may respond disruptively to classroom challenges.

Increasing concerns in schools regarding problem behaviour displayed by students such as kicking, hitting and talking out of turn have been reported in the research. These behaviours often lead to a disruptive classroom environment, negative peer interaction and, according to teachers, remain the most challenging aspect of classroom management. Schools typically deal with problem behaviour by implementing rules and expectations for desired student behaviour. While these expectation-focused approaches have shown some positive effects, they do not directly teach skills for positive interaction and effective self-management of emotions. Conflict resolution education and mindfulness programmes have shown positive effects for improved pro-social skills and self-regulatory abilities in children. This thesis describes a combined conflict resolution-mindfulness group intervention that was implemented in one primary school classroom with children aged between six and seven years. The intervention involved teaching children four skills for effective conflict resolution and self-regulation over a period of four weeks. Repeated measures and teacher ratings of positive and negative peer interaction were used to assess programme effects. A single case AB replication design was used. The repeated measures findings indicated no change in positive or negative peer interactions for all nine focus children. Teacher reports of behaviour related to positive and negative peer interaction for all children in the classroom showed good effects. Possible reasons for the lack of change in the repeated measures findings include the young age of the children and an insufficient number of sessions and skill practice opportunities.

Chapter One

Introduction

Social Skills

Social skills are an aspect of social emotional competence that are crucial for developing and maintaining healthy interpersonal interactions with others (Gresham & Elliott, 1987).

Successful early peer relationships are fundamental to establishing healthy relationships throughout childhood as well as later in life and therefore have been a focus of child development research since the early 1900's (Schneider, 2000). Furthermore, a child who has well developed social skills is better equipped to meet the various social challenges and demands that are faced in everyday interactions with peers. Self-awareness in children develops during the first year of life and typically emerges in conjunction with the experience of various emotional responses such as jealousy and shame (O'Shea, 2004). As self-awareness continues to develop throughout preschool years, children become more confident and begin to venture from the safety of their parents to engage in increased interaction with peers (Asendorpf, Warkentin, & Baudonnière, 1996; O'Shea, 2004). Primary school¹ children who have self awareness, can implement effective self-management skills, have the ability to show social awareness and can make sensible decisions are likely to have positive learning outcomes (Collaborative for Academic, Social, and Emotional Learning., 2012).

Most infants are born into social environments and peers typically become an integral part of a child's world at an early age (Hay, Payne, & Chadwick, 2004). Research suggests that children show signs of peer interactions as early as infancy. A study involving 20 newborn infants found that babies cried upon hearing another baby's cry (Sagi & Hoffman, 1976). The authors concluded that the crying reaction of one infant in response to another infant's distress may characterise early signs of empathy. Responding empathetically to

¹c.f., primary school, the term used in New Zealand and other commonwealth countries, and the term elementary school used in the USA both refer to equivalent school grades.

another person's emotional experience is fundamental to pro-social behaviour (Eisenberg, 2006). Early interactions with other children may occur in the context of childcare settings and through parents socialising with other parents and children. Through these early interactions children are given the opportunity to learn healthy interaction skills and to practise pro-social behaviour. Within these early experiences, children also experiment using different social skills and learn the difference between acceptable and unacceptable behaviour (Ladd, 2005). Peer relationships are unique in that they typically offer a context of balanced power within which children develop and adapt interaction skills to facilitate cooperation (Hartup, 1989; Ladd, 2005).

Positive Social Interaction

A secure parent-child attachment offers a context in which children learn basic skills for social interaction (LaFreniere, 1996) and provides a child with the necessary confidence to explore and develop future relationships (Carr, 2006). Within a secure attachment relationship children learn how to negotiate a balance of cooperation and competition, an important aspect of healthy interaction with others (LaFreniere, 1996). In addition, a secure attachment supports the development of self-efficacy which is important in supporting a child to feel empowered to independently build and maintain future relationships (Cowen, 1994).

Certain skills that develop throughout different stages of typical child development are important in forming an ability to relate positively with others (Carr, 2006). One core skill is the ability to self-soothe. Self-soothing skills allow an infant to manage distress by supporting a return to baseline state and established self-soothing skills assist children to manage emotions and adjust attention according to the demands of the environment (Carr, 2006). Young children who have not yet established independent self-soothing abilities often rely on adults to feed and rock them to help remain in a calm state or return to a calm state following

a period of emotional arousal. As children continue to develop they typically learn these skills themselves and rely less on adult assistance with this task (Carr, 2006).

Early self-soothing skills developed in infancy are followed by self-regulation skills. Self-regulation broadly involves a capacity to sustain attention, to act with thought and intention, to resist immediate gratification, to adapt behaviour according to demand and to initiate, maintain, and/or discontinue behaviour in response to instruction and/or demand (Blair, 2002; Kopp, 1982; McKown, Gumbiner, Russo, & Lipton 2009; Sanders & Mazzucchelli, 2013). Having a developed sense of autonomy, identity and the ability to self-monitor are all important in reaching a point where children are able to self-regulate to manage their own behavioural and emotional responses (Kopp, 1982). The process of emotion-regulation requires interaction between cognition and emotion to facilitate the awareness of slight changes in emotion (Blair, 2002; Piotrowski, Lapierre, & Linebarger, 2013; Teper, Segal, & Inzlicht, 2013). As with self-soothing, in the early development of emotion-regulation others typically assist children with the regulation task until external assistance is no longer required (Eisenberg, Spinrad, & Eggum, 2010). Effective self-regulation of emotions and behaviour assists positive interaction because it supports children to be patient with others, to follow instructions and to show respect by giving thought to behaviour before acting (Rimrn-Kaufman, Curby, Grimm, Nathanson, & Brock, 2009).

Another important skill for social interaction is joint attention. Joint attention involves sharing attention with another person. During infancy this involves directing the gaze to where another person is looking so that attention of both is directed to the same place and/or object (Butterwoth, 2001), a skill present at birth and established in basic form by four months of age. Joint attention skills are important for maintaining non-verbal interaction with another person and these skills are particularly important during infancy because language

abilities are still emerging (Hay et al., 2004). Joint attention skills at age two have been found to influence the theory of mind capacity of children aged four years (Charman et al., 2000).

Piaget's four stages of cognitive development place theory of mind in the pre-operational stage of cognitive development, which usually occurs between the ages of two to seven years (Carr, 2006). Theory of mind involves the capacity to ascertain and interpret what another person might be thinking (Dunn & Cutting, 1999) and in its early development is mostly based on intuition and perceptual processes (Carr, 2006). An understanding that inner states and perceptions are linked to a person's behaviour is important as this underlies many aspects of early childhood relationships such as showing empathy, caring for another person and imaginative play (Dunn & Cutting, 1999). Aspects of theory of mind continue to develop through childhood into adolescence when abilities such as introspection and reflection become more fully established (Carr, 2006). In a study by Dunn and Cutting (1999) children from secure family environments of higher socioeconomic status who showed the ability to see the perspective of another person during social interactions were found to have more cooperative friendships and to display lower levels of conflict during interactions. Children with an increased understanding of emotions and higher levels of pro-social behaviour are also typically more accepted and respected by peers (Denham, McKinley, Couchoud, & Holt, 1990).

Another important skill is inhibitory control, an aspect of executive functioning (Dowsett & Livesey, 2000). Executive functioning abilities include initiating, modulating, and/or inhibiting attention and behaviour for the purpose of completing a specific task (Dennis, 1991). Inhibitory control involves resisting the urge to act on impulse (Rhoades, Greenberg, & Domitrovich, 2009). Children with established inhibitory control abilities are generally more pro-social in their interactions than those without well developed inhibitory control abilities.

Skills related to caring, helpfulness and sharing begin to emerge between the age of one and five years (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). During this time children begin to make connections between the experiences of others and their own, thus fostering an increased sense of empathy. A balanced view of one's personal needs in comparison to the needs of another person also begins to emerge and facilitates positive interaction.

Finally, language development takes place from before birth and plays a large role in facilitating social interaction. Research shows that early language consistent with 'babbling' is used by infants to communicate socially around seven months of age (Carr, 2006) and as language abilities develop, children increasingly influence their own and others' behaviour through the use of language.

Positive Social Interaction with Peers

Processes that support healthy peer interaction offer insight into the difficulties that some children experience when negotiating peer interactions (Hay et al., 2004). Early peer relationships can be challenging for many children as a study by Gunnar and Donzella (2002) demonstrated. Findings from the study indicated that young children, aged between two and three years, showed increased daytime levels of the stress hormone cortisol when engaging with peers. The authors concluded that this was possibly due to the difficulty children often experienced in balancing the demands of initiating and responding to ever-changing peer dynamics. Reductions in cortisol levels appeared to mirror developmental increases in the acquisition of pro-social skills. This indicates that although initially challenging, as children become more proficient at managing peer relationships with the use of improved social skills, interactions become less stressful and more manageable.

During early play, the use of imitation may facilitate the feeling of connectedness and promotes increased pro-social interaction between toddlers (Eckerman, Davis, & Didow,

1989). Eckerman et al. (1989) found that children aged between 16 and 32 months predominantly used imitation as a means of non-verbal communication. Due to the importance of non-verbal interaction prior to the emergence of established language abilities, imitation is a useful skill for young children to master (Eckerman et al., 1989).

Children's early peer relationships inevitably involve situations of conflict (Hay et al., 2004), and cooperation and competition are both clearly expressed in the peer relationships of children aged between two to four years. Balancing the desire to compete with the need to cooperate with a peer, in addition to necessary coordination of emotional responses, are processes that facilitate positive interaction (LaFreniere, 1996). Children who struggle with these abilities are likely to experience ongoing interactions that are characterised by conflict. Some behaviours that are observed during early peer conflict such as hitting and the snatching of toys may contribute to levels of increased aggressive behaviour as children get older (Hay et al., 2004; Hay, 1985). By the age of four years children will typically show increased independence and will engage in interactive play that is characterised by predominantly pro-social or problem behaviour depending on whether the child has mastered effective pro-social skills or not (Duby, 2011). From the age of five to six years, children will generally feel confident spending increased amounts of time with their peers (Duby, 2011) and between the ages of five and seven they typically use social skills with increased efficiency to manage individual emotions and the emotions of others (Carr, 2006; Midgley & Vrouva, 2012). As differences between the thoughts, feelings and opinions of children become more pronounced within interactions, the opportunity to practise and refine conflict resolution skills arise (Coolahan & Fantuzzo, 2000; Guralnick, 1993). Furthermore, peer relationships and interactions provide plentiful opportunity for young children to explore and practise impulse control, and to develop appropriate strategies, other than the use of force, for resolving conflict (Caplan, Vespo, Pedersen, & Hay, 1991).

Established peer relationships are likely to support the continued development and ongoing consolidation of healthy social skills (Eisenberg, 2006). Conversely, children who struggle to establish healthy peer relationships are faced with less opportunity to practise interacting in a pro-social manner. These factors underline the importance of supporting young children to establish skills for maintaining healthy relationships with others. As children enter school, peer acceptance becomes more important and acts as a protective factor for both problem and antisocial behaviour (Ladd & Burgess, 2001). In a study of factors that contributed to healthy school adjustment, Ladd and Burgess (2001) found that acceptance from peers had a positive effect on cooperative behaviour and assisted with the transition from kindergarten to school. Peer acceptance was also linked to an increased sense of belonging and feelings of inclusion that together supported engagement in positive and pro-social behaviour. In a study by Ladd, Kochenderfer and Coleman (1996) positive feedback between two friends was found to be a supportive maintaining factor of cooperative and satisfying peer relationships while interpersonal conflict created disruption and was found to be of cost to friendships. Feeling safe and accepted by peers appeared to further characterise positive peer relationships. Furthermore, children with established self-regulatory abilities upon transition to kindergarten were found to display an increased ability to control behaviour and showed higher levels of productivity in the classroom environment.

Both biological and environmental factors interact to influence child behaviour (Wang, 2011). Through interaction between cognitive, physical, social and emotional areas of development children learn skills which build upon each other in order to foster positive growth (Carr, 2006). It is important to recognise that while some of these factors influence child development in a positive way, certain factors contribute to dysfunction and problem behaviour (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2002).

Behaviour Problems

There are developmental pathways associated with difficult temperament that may warrant clinical diagnosis, the presence of callous-unemotional traits in childhood being one of these (Tremblay, 2010). However, the aspects of problem behaviour that are involved in negative peer interaction and that are discussed in the present study focus on children who engage in levels of problem behaviour that do not warrant a formal diagnosis yet contribute to negative outcomes for an individual. Behaviour problems common to negative peer interaction include kicking, hitting, biting, grabbing, pushing and verbal behaviours such as talking back, making threats and calling people names (Beaman, Wheldall, & Kemp, 2007; Stoolmiller, Eddy, & Reid, 2000; Tremblay, 2010; Vanderheyden, Witt, & Gatti, 2001).

In the development of behaviour problems, several factors are worthy of discussion. A child's temperament develops in the initial months of life and plays a role in behaviour problems (Duby, 2011). Differences in child temperament have been classified as 'easy', 'difficult', or 'slow to warm up' and are conceptualised as existing on a continuum (Duby, 2011). Many children do not exclusively 'fit' into one of the above categories but rather they display characteristics of more than one classification (Chess & Thomas, as cited in Duby, 2011). Children with an 'easy' temperament tend to have good regulatory abilities and are generally fairly adaptive. Children with a difficult temperament tend to struggle with regulating themselves, experience more negative moods and struggle to adapt to change. Children with a slow to warm up temperament tend to demonstrate difficulty with adapting to change however, they usually do adapt well to new things following exposure over time. Difficult temperament is a risk factor for problem behaviour and children classified according to this category generally have peer relationships that are higher in conflict (Chess and Thomas as cited in Carr, 2006; Harstad & Barbaresi, 2011). When a child's temperament is at conflict with demands placed upon them, for example, when a child with a slow to warm up

temperament is expected to readily and quickly accept a sudden change in routine, the likelihood of problem behaviour increases (Pipan & Blum, 2011). Expectations may be placed on a child by parents, teachers and other adults as well as the environment itself. Children will naturally respond to expectations differently depending on their individual temperament and therefore, an awareness of an individual child's temperament is important in both home and school contexts.

In line with the research on the importance of a secure attachment in the development of pro-social skills (Carr, 2006; Cowen, 1994; LaFreniere, 1996), young children who do not develop a bond with their parent(s) are less likely to develop strong patterns of internal control and the capacity to self-regulate (Patterson, DeBaryshe, & Ramsey, 1989). A lack of internal control can lead to difficulties with behaviour inhibition resulting in impulsive actions and other difficulties such as higher levels of aggression, difficulties cooperating with others, increased risk for substance abuse, psychological difficulties and later criminal behaviour (Haskett, Stelter, Proffit, & Nice, 2012; Moffitt et al., 2011; Tangney, Baumeister, & Boone, 2004; White, Jarrett, & Ollendick, 2013).

Children are constantly interacting with and learning from their environment and there is a clear link between ineffective parenting strategies, such as inconsistent discipline, and childhood behaviour problems (Vuchinich, Bank, & Patterson, 1992). One view of the underlying influences on behaviour problems is that children learn behaviours such as kicking, hitting and non-compliance through observing these behaviours in others. Children may also become somewhat numb to the impact of aggression on others because these patterns of behaviour have been normalised in the family home environment (Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000; Patterson et al., 1989). Children who engage in negative interactions may develop a pattern of expecting hostility from others and therefore pre-empt this by acting aggressively themselves and/or reacting toward others with aggression

(Midgley & Vrouva, 2012). Factors within the family unit that negatively impact on healthy family functioning and adaptive parenting abilities include the presence of behaviour problems in other family members, problems in the marital relationship such as fighting and divorce, uninvolved parents and poverty (McLoyd, 1990; Patterson et al., 1989; Singer & Miller, 1999).

As described above, children are more likely to develop coercive patterns characterised by problem behaviour if positive reinforcement and discipline are used inconsistently in the home setting (Vuchinich et al., 1992). Not only do these children often develop antisocial behaviour, they also fail to learn effective pro-social skills (Hastings et al., 2000; Patterson et al., 1989). Behaviour problems are more likely to become entrenched for children raised in dysfunctional family situations than if problematic behaviour is situation specific. For example, if the problem behaviour is only displayed when interacting with peers and when it is learnt later in life (Sprague & Walker, 2000). Consistent and fair parenting strategies that allow children to learn about the consequences of behaviour are likely to support positive interaction (Baumrind & Black, 1967). Furthermore, parents who themselves have developed the capacity to self-regulate are more likely to model appropriate behaviour and effective coping strategies to their children (Blair, 2002; Sanders & Mazzucchelli, 2013).

Important cognitive processes have been noted in children who engage in disruptive and aggressive behaviour and these are typically featured by suspicion of others, a difficulty in correctly understanding non-verbal cues and the misinterpretation of the intentions of others. Often these patterns of cognition are formed between the primary school ages of six to twelve years (Aber, Brown, Chaudry, Jones, & Samples, 1996; Embry, Flannery, Vazsonyi, Powell, & Atha, 1996).

Negative Peer Interaction in the Classroom

Behaviour problems can start early in life prior to schooling however, these problems are often amplified during the early years of school attendance (Sprague & Walker, 2000). In addition to behaviour problems such as kicking and hitting, behaviours that are commonly encountered in primary school aged children can be disruptive and aggressive. Non-compliance, students leaving their seat and distracting others, talking out of turn and fighting or bullying are particularly disruptive to the learning environment (Liaupsin & Scott, 2008). These behaviours cause differing levels of disruption with talking out of turn generally causing a lower level of disruption and fighting typically causing significant disruption (Liaupsin & Scott, 2008). While children are expected to display some inattention at school, should this escalate to a frequent and sustained lack of attention then learning is likely to be interrupted (Carboni, Roach, & Fredrick, 2013).

Patterson, Reid and Dishion (1992 as cited in Sprague & Walker, 2000) wrote that young children exposed to harsh parenting styles and children with parents who model aggressive behaviour in the home environment are less equipped to cope with the start of school, are more likely to show aggression in their interactions with peers and often struggle to develop healthy problem solving skills. Many young children who display early behaviour problems within the home environment may struggle when beginning school due to difficulties adjusting to new expectations and routines (Sprague & Walker, 2000). However, for some children behaviour problems are limited to specific settings such as the school environment. In the latter case, teachers and peers play a critical role in guiding, shaping and at times maintaining problem behaviour in children (Sprague & Walker, 2000).

Similarly with the findings concerning the role families and parents play in child development, in classrooms, behaviour problems are more likely to occur when students struggle to manage their impulses and emotional responses through self-regulation and when

teachers do not effectively manage their class (Neuenschwander, Rothlisberger, Cimeli, & Roebbers, 2012). Students are also more likely to display problem behaviour when a task is too difficult or when paying attention to a task is a struggle for a child (Carboni et al., 2013; Robinson & Griesemer, 2006). When teachers fail to be adaptive and skilful in how they set up and maintain a sense of order within a classroom, students are more likely to react with undesirable behaviour that leads to disruption (Doyle, 2006). The relationship established between teacher and student is influenced by both parties and often has an impact on how a student learns and behaves in the classroom setting (Ladd & Burgess, 2001; Sheets, 2002). A distant relationship between student and teacher is more likely to result in a student becoming disengaged from learning as opposed to a supportive relationship which is engaging. Teachers and students must be able to engage well throughout the primary school years as the process of disengagement starts early (Schlosser, 1992).

Some of the immediate effects of behaviour problems for children include low levels of positive engagement with teachers, increased non-compliance with teachers' requests (Shores et al., 1993) and peer and/or teacher rejection (Patterson et al., 1992 as cited in Sprague & Walker, 2000). These difficulties can have an impact on outcomes in adolescence and heighten the risk for poor academic achievement, school drop-out, mental health difficulties, irresponsible and/or criminal behaviour (Fergusson, Horwood, & Ridder, 2005; Sanders & Mazzucchelli, 2013; Patterson et al., 1992 as cited in Sprague & Walker, 2000). Intervening early with children who display problem behaviour is recommended in order to interrupt patterns of problem behaviour that can lead to the above negative outcomes for an individual (Sprague & Walker, 2000). Supporting children to successfully transition from the early developmental stage during which behaviour is primarily determined by desire and is strongly connected with arousal levels to a stage where behaviour and emotions are both

integrated and regulated is crucial to fostering positive outcomes (Denham & Weissberg, 2004).

School Approaches that Address Social Skills and Problem Behaviour

Teacher reports indicate that there is no one behaviour that is viewed as most disruptive and the perceived level of disruption varies according to different teachers (Robinson & Griesemer, 2006). Schools provide intervention at different levels in an effort to address behaviour problems which include working with children in a one on one situation, implementing strategies in the classroom environment and addressing the whole school (Ministry of Education [MoE], 2009b).

Individual targeted intervention. Many changes have taken place since special education was established within the wider education system in New Zealand in 1989 (Mitchell, 2001). Special education now allows students to receive additional support at an individual level in order to foster ongoing engagement with the curriculum in line with the aim of keeping children in school. Teachers, in collaboration with Resource Teachers of Learning and Behaviour (RTLB) often design Individual Education Plans (IEP) and implement these with students who are struggling in specific areas related to learning. The teaching that a student receives is targeted to their individual needs according to the academic and behaviour goals outlined in the IEP (Lynch & Beare, 1990; Mitchell, 2001).

Various initiatives funded by the MoE are implemented in selected schools and aim to improve student development. The Tu Tangata Programme is one programme that has received the support of the MoE (Murrow et al., 2004). Tu Tangata aims to increase feelings of self-worth and has the goal of keeping students on track with their academic work thereby increasing the likelihood they will remain engaged in the learning process. As part of the Tu Tangata programme individual students who show concerns in areas of behaviour, academic

achievement and social ability are appointed an Educational Support Person (ESP) who works closely alongside the individual to achieve their goals (Murrow et al., 2004).

Classroom Strategies. Classroom management techniques are integrated into teacher-training courses (Stough, 2006). Despite this, many teachers report that when working in a classroom they do not feel confident in managing student misbehaviour even with ongoing in-service training (Stough, 2006).

Several interventions that are implemented by classroom teachers and are delivered to a whole class of students are available. The Good Behaviour Game ([GBG] Barrish, Saunders, & Wolf, 1969) was first implemented in 1969 and is based on the reinforcement of desired behaviours in an attempt to eliminate behaviour which causes disruption. In the GBG students work together in teams to earn rewards by adhering to a select number of basic rules set out by the teacher such as remaining seated, raising a hand before speaking and speaking respectfully at all times. The rules describe acceptable behaviour for which rewards can be gained. Behaviour that is deemed unacceptable and for which rewards cannot be gained is also made clear. The aim is for students to regulate both their own behaviour and that of their peers by staying within the rules of the game (Kellam et al., 2008).

The Incredible Years for Teachers Classroom Management Programme ([IYTP] Ford et al., 2012) aims to equip teachers with a variety of behaviour management skills for use alongside their regular teaching methods. The programme is widely offered to teachers in New Zealand and internationally and promotes the development of teachers' skills for proactive classroom management. Teachers develop strategies for setting expectations for desirable student behaviour, the modelling of self-regulation skills among other useful approaches that lead to strengthened relationships between teachers and parents.

School-wide programmes. School-wide strategies are usually implemented by all teachers and school staff in an effort to create a collective plan and structure for dealing with

unacceptable student behaviour. Having a process by which behaviour is managed is viewed as an important aspect in building a strong school culture as this can have an impact on the behaviour students are likely to display. It is emphasised by the MoE that the end goal of behaviour management processes in New Zealand schools is to enable students to remain at school and to not face suspension (Ministry of Education, 2009b). School-wide programmes aim to create and foster a positive school environment and existing programmes include the Positive Behaviour Support Programme ([PBS] Benedict, Horner, & Squires, 2007; Luiselli, Putnam, Handler, & Feinberg, 2005), Linking the Interests of Families and Teachers Programme ([LIFT] Stoolmiller et al., 2000), and Peace-Builders Programme (Embry et al., 1996). Within a school-wide approach, individual one on one intervention is generally reserved for students who display behaviour problems which are persistent and severe.

The Positive Behaviour for Learning ([PB4L] Ministry of Education, 2012a) is a school-wide programme that has been implemented widely across schools both in New Zealand and internationally. The PB4L includes the delivery of programmes to teachers and parents, the establishment of a positive school culture and a behaviour crisis response service targeted at addressing severe incidents of student misconduct. The focus across all aspects of the programme is on setting clear expectations for behaviour that is desired and consistent teacher acknowledgement of positive student behaviour (Ministry of Education, 2012a).

The Cool Schools Peer Mediation Programme (Barnes, 2007) is one example of a peer mediation training programme that has been delivered widely across a large number of New Zealand schools. Teachers and a select group of students receive training in how to be a peer mediator. The peer mediation process involves the peer mediator acting as a third party to assist their peers in resolving conflict. This programme only teaches a select number of students how to mediate peer conflicts effectively and typically does not involve teaching all children in a classroom or school (Barnes, 2007).

The Ka Hikitia- Managing for Success Strategy was developed and implemented by the MoE in 2008 (Goren, 2009). The Ka Hikitia strategy consists of a policy framework which aims to increase the quality of learning and teaching for Maori students and thereby enable students to achieve their potential. The policy and framework has been implemented nationwide throughout early childhood and tertiary education (Goren, 2009). An area of focus is on the early years of schooling in an attempt to improve early engagement in education and to establish a strong academic foundation for children.

School disciplinary procedures. Systematic processes are employed by New Zealand schools that generally involve periods of forced student absence in the of case of severe problem behaviour (Ministry of Education, 2009a). The Education Act 1989 provides guidelines for what schools are required to do in specific circumstances when it is deemed unsafe for a student to remain at school. The guidelines and processes are relevant to all schools that receive funding from the government (Ministry of Education, 2009a). Updated guidelines were developed in 2009 and state the legal requirement schools are to abide by in the case of student misbehaviour and when student safety is at risk. Student stand-down, suspension and expulsion or exclusion all involve a student having periods of forced absence from school (Ministry of Education, 2009a). These three disciplinary procedures are recommended to only be enforced should a student engage in an event classed as gross misconduct (Ministry of Education, 2009a). Examples of behaviour that may lead to a student being asked to remain absent from school include verbally or physically assaulting a teacher, disobedience which is continual and/or behaviour which carries a risk of harm to others.

Summary of School Approaches

The programmes and strategies typically implemented by schools share a common goal, namely to reduce aggressive and disruptive behaviour. School approaches involve teaching all students except for in the Cool Schools Peer Mediation Programme which only teaches

selected students and teachers (Barnes, 2007). It is likely that the different approaches assist students to learn context specific self-control skills such as: how to follow rules, how to stay within certain boundaries of acceptable and unacceptable behaviour, how to engage in learning with increased support and the concept that certain behaviours result in consequences.

Limitations of Current School Approaches

Self-regulation abilities allow children to evaluate and manage behaviour in any number of situations without external measures in place (Flannery et al., 2003; Kopp, 1982; Sprague & Walker, 2000) and are thought to be both fundamental to and required for the development of socially acceptable behaviour (McKown et al., 2009). The strategies implemented by schools typically involve adults determining which behaviours are acceptable and expected as well as determining those that are unacceptable. As a result, student behaviour is likely to be guided by the people and rules around them rather than by themselves.

The efficacy of programmes currently implemented in New Zealand schools appears to be mixed and in certain cases it appears that programmes have not been subject to any rigorous evaluation. No empirical research could be identified to support the evidence base of the Tu Tangata programme (Murrow et al., 2004), the Cool Schools Peer Mediation Programme (Barnes, 2007), the PB4L programme (Ministry of Education, 2012a) or the Ka Hikitia-managing for success strategy (Goren, 2009). Some programmes however, have been evaluated and the research offers mixed reports on how successful these current approaches are. Peer mediation programmes in general have indicated small effect sizes for aggressive behaviour (Wilson, Lipsey, & Derzon, 2003), suggesting that teaching only selected individuals mediation skills may result in many students missing out on the benefits of intervention. This highlights a potentially significant limitation of peer mediation programmes such as the Cool Schools Programme (Barnes, 2007). The IYTP was recently evaluated and

preliminary findings suggested it to be an efficacious programme for implementation in primary schools (Fergusson, Horwood, & Stanley, 2013; Webster-Stratton, Reid, & Stoolmiller, 2008). The GBG has also been evaluated and one study reported only marginal effects for reductions of oppositional behaviour in young children (Leflot, Lier, Onghena, & Colpin, 2010). A second study by Barrish et al. (1969) reported reductions in disruptive behaviour and in the amount of talking out of turn following implementation of the GBG.

There is some acknowledgement in the research that although the quality of the New Zealand education system has improved over the years there is still progress to be made in the effective management of student behaviour (Ministry of Education, 2011; Ministry of Education, 2012b). Teachers consistently report that behaviour problems are some of the most significant concerns they deal with on a regular basis (Liaupsin & Scott, 2008). These findings indicate that behaviour problems in schools are still of great concern and that more effective programmes must be developed (Beaman et al., 2007).

Alternative Programmes

Longitudinal studies conducted in New Zealand and other countries have provided data that indicate seven to eleven percent of primary school aged children are at risk of developing consistent patterns of elevated aggression throughout their lifetime (Tremblay, 2010). There is a need for early intervention and cost effective interventions that supports children to develop healthy patterns of behaviour. Early interventions targeting pro-social skills may be particularly important in reducing the likelihood of disruptive behaviour occurring and of this behaviour becoming entrenched (Tremblay, Vitaro, Gagnon, Piche, & Royer, 1992). For children to learn how to engage in socially competent behaviour, it is necessary that they are taught the required skills such as emotion regulation (McKown et al., 2009). Schools are suitable settings in which to intervene with treatment because of the supportive environment that can be facilitated by school staff (Weissberg, Caplan, & Harwood, 1991).

Conflict resolution education programmes have been delivered in the school setting with a goal to improve children's social and interpersonal skills and have shown medium effects for reductions in problem behaviour (Clayton, Ballif-Spanvill, & Hunsaker, 2001; Garrard & Lipsey, 2007). Mindfulness programmes teach children emotion regulation skills and strategies to gain a sense of control over emotional and behavioural impulses (Burke, 2010), and medium effects have been reported for the use of these interventions with primary school aged children.

Chapter Two

Literature Review

The objective of this literature review was to identify and critique previous intervention studies involving the delivery of conflict resolution and mindfulness programmes for children. A literature search was conducted using databases which included: ERIC, SocINDEX, Education Research Complete, SPORTDiscus, eBook Collection EBSCOhost, CINAHL, PsycINFO, Australia/New Zealand Reference Centre, Psychology and Behavioral Sciences Collection, PsycARTICLES, PsycBOOKS and Academic Search Complete. Search terms that were used included: 'mediation training', 'mental health', 'conflict resolution', 'mindfulness', 'results', 'child*' and 'school*'. Research studies were included if they were an intervention study, child outcomes were measured, the intervention was suitable for delivery in a public primary school classroom setting, the article was written in English and if the results could be analysed. Programmes targeting children of primary or elementary school age were the focus of the review and studies in which participants were specified as attending middle school or above are not discussed. Twenty seven studies involving interventions aimed at teaching children skills and strategies were identified.

Conflict Resolution Education Programmes with Primary School Aged Children

Thirteen intervention studies (Table 1) implemented programmes that were designed to teach children in a classroom or school setting what to do when conflict arises.

The Positive Action Programme (PAP). The PAP is a curriculum based school-wide programme that has been revised since it was originally developed by Carol Allred in 1977 (Flay, Allred, & Ordway, 2001, p. 75). The revised PAP is delivered by classroom teachers in schools from kindergarten through to grade twelve. Three primary goals of the PAP are to increase student levels of academic achievement, encourage the development of positive student behaviours and foster student character development (Beets et al., 2009). The PAP

structure involves teaching sessions that are delivered by classroom teachers and integration of the PAP principles into the wider school environment with a goal of fostering a positive school climate. The PAP is organised into seven teaching units. The content of the PAP is based on the concept that when engaging in positive actions one experiences positive feelings and it is the experience of these feelings that increases the likelihood of engaging in future positive actions. Students are taught what types of activities elicit positive feelings, how to gain self control over one's thoughts and feelings, how to develop a code of conduct to guide how to behave when interacting with others, how to communicate in a positive manner and how to cooperate when working with other people. Students also learn about honesty and how to identify the strengths and weaknesses of their own character, how to set goals, what assists in developing courage and how to approach problems with optimism (Flay & Allred, 2003).

A study by Beets et al. (2009) assessed whether implementing the PAP had a preventative effect on student engagement in substance abuse, violent behaviour and sexual activity. The PAP was delivered to students aged ten to eleven years through classroom based lessons. The use of role plays, group activities, discussions and skill practice opportunities encouraged student participation and fostered an interactive learning environment. A pre-post test design was used to assess outcomes following intervention. Findings from student and teacher reports of behaviour revealed that following participation in the PAP students displayed reduced rates of violent behaviour such as physically hurting others, threatening others and destroying others' belongings. Reduced levels of sexual activity and substance use were also reported.

Conflict Resolution Training (CRT). The CRT programme (Bilgin, 2008) utilises strategies from the peer mediation programme Teaching Students to be Peacemakers-Peer Mediation Programme (Johnson, Johnson, Dudley, & Magnuson, 1995) and incorporates these into conflict resolution training sessions. According to the CRT programme philosophy,

the response to conflict rather than the conflict itself determines whether a conflict is defined as destructive or constructive. Therefore, the primary strategy children learn throughout the CRT is perspective-taking with the goal of encouraging constructive responses to conflict. Perspective-taking is incorporated to assist children's understanding that the needs of both parties are important when in conflict and children learn a very prescriptive step-by-step model for conflict resolution (Bilgin, 2008, p. 542).

Bilgin (2008) conducted a study to assess whether students would show an increased ability to resolve conflicts constructively following participation in the CRT. Fourth grade elementary students were delivered CRT sessions by a non-school instructor. The age range of participants was not reported. Sessions involved the use of role plays and group discussion as well as regular opportunities to review concepts and strategies. Concepts covered in the CRT sessions included talking about the conflict with the other person, using "I" messages and brainstorming. A step-by-step negotiation process that involved naming feelings, stepping into the shoes of another person and generating three positive solutions was introduced and practiced by students. A pre-post experimental design was employed in order to assess CRT programme effects. In response to two hypothetical situations involving conflict, students reported how they would potentially act. Results indicated that students did not respond more constructively to hypothetical conflict scenarios following the CRT intervention (Bilgin, 2008).

Life Skills Training (LTS). The LTS intervention (Botvin, Griffin, & Nichols, 2006) targets several risk factors related to problem behaviour including substance use and violence. Both the cognitions and behaviour of children are the focus of the intervention with the view that by addressing underlying factors that lead to unhealthy decision making and detrimental outcomes, positive outcomes are more likely to occur. Children learn effective problem solving skills, skills for making healthy decisions and stress and anxiety management

techniques. Interpersonal skills and conflict resolution skills are taught alongside strategies for improving assertiveness. The intervention is typically taught by classroom teachers who are provided with an intervention manual to guide implementation (Botvin et al., 2006).

Botvin et al. (2006) investigated whether the LST had a preventative effect on levels of violence and delinquent behaviour. The LST was implemented in 21 schools with students in the sixth grade. The length of the intervention and individual sessions was not reported. Teachers taught the intervention material via the use of group discussion, skill practice exercises, modelling, homework assignments and direct feedback. The intervention effects were assessed via student self report at pre-post intervals. The authors reported that levels of fighting, aggression and delinquent behaviour reduced (Botvin et al., 2006).

Forgiveness Intervention (FI). The FI was developed by Enright and Knutson (2003) on the premise that fostering forgiveness in children will lead to increased empathy for others as well as reduced feelings of anger. Stories are used to teach children multiple ways of responding to conflict and children are taught that they have multiple choices when faced with the decision of how to respond to others. At the beginning of the intervention underlying concepts related to forgiveness are introduced and include recognising other people's worth, giving respect and acting with grace. Children are then read stories in which forgiveness is regularly portrayed and children are encouraged to think about how they might wish to forgive others who have hurt them (Enright & Knutson, 2003).

Enright and Knutson (2003) delivered the FI to children in seven elementary schools in order to assess whether levels of anger reduced following participation. All participants were enrolled in the first grade of primary school and were seven years of age. Participants were randomly assigned to an experimental or control group. In the experimental group the FI was delivered across 17 sessions that were taught once a week for approximately 45 minutes. Classroom teachers delivered the intervention and were given a manual to loosely follow in

addition to consultation sessions with a registered psychologist who advised them on aspects of implementation specific to their individual classroom. Teachers used stories as the primary vehicle for teaching the session content. A pre-post experimental design was used to assess intervention effects. Student self reports indicated that following participation in the FI, children showed decreased levels of anger when compared with the levels reported by control group children. Gender was controlled for in the analysis of results and no gender effects were reported by the authors (Enright & Knutson, 2003).

Promoting Alternative Thinking Strategies (PATHS) Curriculum. The different facets of emotions and problem solving skills for use in social situations are core aspects of the PATHS curriculum (Greenberg, Kusche, Cook, & Quamma, 1995). The aim of the curriculum is to equip elementary school aged children with the skills to effectively express, understand and regulate their emotions. This process is promoted through teaching children about the complexity of emotions with the developmental capabilities of young children in mind. The PATHS curriculum is founded in theory which proposes that young children's affective states develop before more complex thinking abilities. The focus of the PATHS curriculum is therefore on improving children's skills in basic emotion awareness through developing skills for talking about emotions, identifying and explaining emotions, recognising different emotional states and acknowledging the transitory nature of emotions. Traditionally, the PATHS curriculum is delivered by classroom teachers in a classroom setting over the period of one school year. Curriculum sessions typically include the use of role-play, group discussion and generalisation exercises to encourage children to retain and use the newly acquired skills and knowledge (Greenberg et al., 1995).

A study by Greenberg et al. (1995) assessed whether the PATHS curriculum improved emotion competence in a sample of elementary school children. The PATHS curriculum was delivered to children in both regular classrooms and special education classrooms (only the

results for the children in the regular classroom are discussed in this review). The mean age of children was eight years. The PATHS curriculum was delivered over 60 sessions and was adapted to suit the needs of second and third grade children. The primary focus of the adapted curriculum content was on improving children's emotion, self control and problem solving knowledge and skills. Children learnt that all emotions are acceptable but they were also taught that certain behaviour can be unacceptable and therefore the judgement and assessment of behaviour rather than emotional states is most helpful. Children also learnt strategies for communicating their emotions and feelings to others, for recognising shifts in emotions and for controlling their emotions through using a step-by-step 'traffic light' problem solving technique. The content was delivered using role play, teacher and peer modelling and pencil and paper exercises. Intervention effects were assessed through a pre-post experimental design. Findings from interviews conducted with the children indicated that children showed improvements in labelling emotions as well as the ability to explain their own emotional experiences. Children also showed improvement in recognising changes in emotions. No effect was found for more complex reasoning abilities such as the recognition of emotional cues, for recognising the presence of simultaneous emotions or for managing emotions more effectively. Finally, teacher reports indicated that children with high levels of externalising behaviour showed no improvement following intervention (Greenberg et al., 1995).

Conflict Resolution Training Program (CTP). The CTP was developed by Güneri and Çoban (2004) and incorporated several strategies from previous conflict resolution training programmes. A goal of the CTP is to offer students effective conflict resolution strategies that they can use whenever necessary. Students are taught skills in areas such as listening, communicating with "I" messages, individual needs recognition and feeling recognition. During sessions, students are encouraged to participate in role plays and group

discussions which are implemented in order to support interactive learning (Güneri & Çoban, 2004).

The primary aim of a study by Güneri and Çoban (2004) was to assess whether the CTP led to increased use of conflict resolution skills in students of a Turkish school.

Participants were drawn from the fourth grade of a private elementary school; the age range of participants was not reported. Sessions were conducted in a classroom setting and involved role plays and the instruction of a clear six step conflict resolution process. Students were taught how to recognise feelings in themselves and others and how to communicate in “I statements”. A pre-post experimental design was followed to assess intervention effects. The study findings indicated that following CTP intervention students were able to recall the intervention skills correctly however, students showed no change in the likelihood that they would implement the skills in hypothetical situations of conflict (Güneri & Çoban, 2004).

Unique Minds School Programme (UMSP). The UMSP (Linares et al., 2005) aims to improve student problem solving abilities, feelings of self efficacy and wider social and emotional functioning. A further aim of the UMSP is to create a positive classroom atmosphere with the goal of improving student learning and classroom behaviour. The UMSP is delivered in a classroom setting and was designed to be delivered as a curriculum from kindergarten through to grade five. Students engage in weekly sessions delivered by a trained classroom teacher. The skills students are taught in the UMSP include how to identify and challenge beliefs which impinge on feelings of self-efficacy, strategies to tackle typical dilemmas such as feeling shy and/or acting on impulse and problem mapping which involves identifying stages of a problem at which it could be resolved positively. The general themes underlying sessions include the concept of being unique, taking personal responsibility, effective problem solving, identification of feelings and establishing connections between mind and body. Each session is delivered according to a semi-structured session plan that can

be tailored to the requirements of individual classrooms. The generalisation of skills beyond the classroom setting is a strong focus and therefore group discussions support the generation of ideas about how the skills could be implemented in various settings such as the school canteen, the school playground and the home environment. The involvement of peers, teachers, general school staff and parents is encouraged and these people are often integrated into informal practice opportunities and homework tasks (Linares et al., 2005).

Linares et al. (2005) measured the effects of the UMSP on feelings of self-efficacy, problem solving abilities, ability to show empathy, listening skills and academic achievement. Students aged between eight and eleven years received instruction on externalising a problem, identifying both positive and negative strategies for assisting with problem solving and how to personalise the use of effective strategies. Weekly sessions were delivered to students over the course of two school years and involved the use of puppets, role plays, group discussion and movement to encourage interactive learning. Opportunities for skill practice were promoted throughout various curriculum based classroom activities and homework tasks were integrated which encouraged parental involvement. A pre-post experimental design was employed in order to assess intervention effects. The authors reported improvements in empathy, listening skills, problem solving and self-efficacy following participation in the UMSP. The most significant effects were reported for pro-social problem solving skills and classroom based social-emotional skills.

Second Step Curriculum (SSC). The SSC is an evidence-based programme that was designed specifically for delivery with primary school aged students by the Committee for Children (as cited in Neace & Munoz, 2012). A goal of the programme is to increase children's ability to interact in a socially positive manner and to minimise the risk of students engaging in aggressive behaviour. As a result of participating in the SSC, the aim is for students to feel competent in responding to conflicts with strategies that do not involve

violence. The curriculum teaches students in a classroom setting how to be empathetic toward others, how to control impulses, how to solve problems by following a step-by-step process and how to control and appropriately express anger and other emotions.

Neace and Munoz (2012) assessed the SSC and its impact on student conflict resolution knowledge and the acquisition of conflict resolution skills for participants aged between eight and twelve years. Rates of student absence and suspension were also assessed. A weekly topic was introduced at the beginning of each session and the use of stories, videos, story cards and role plays were implemented in order to assist with skill practice and the consolidation of learning. The measurement of intervention effects was conducted using a pre-post test study design. Findings indicated that student knowledge of conflict resolution skills and levels of skill acquisition significantly increased. Furthermore, rates of student absence and suspension decreased following participation in the SSC.

Michigan Model for Health Programme (MMH). The MMH is a curriculum based programme that focuses on health education in the prevention of violence and drug use (O'Neill, Clark, & Jones, 2011). The MMH was designed for implementation in schools from kindergarten through to grade 12. Increasing behaviours that support good health, individual well-being and emotional health are the primary focus of the primary school programme. The MMH encourages the active practice and development of skills in the classroom setting and the programme is integrated with the wider school curriculum. The underlying assumption of the MMH is that in developing and practicing social and emotional health skills students will more likely choose behaviours that are conducive to a positive way of living (O'Neill et al., 2011).

O'Neill et al. (2011) conducted a study with an aim to assess whether the implementation of the MMH would prevent substance abuse and/or lead to improvements in student mental health and increased levels of pro-social behaviours. Students aged between

nine and ten years were taught interpersonal skills, enhanced emotional health and well-being skills, strategies for using alcohol and drugs safely and skills for maintaining nutritional and physical well-being. A randomised control study design involved pre-post tests in order to assess intervention effects. The study findings showed large reductions in aggressive behaviour and an increase in student pro-social behaviours following participation in the MMH programme.

Project Working out Integrated Negotiations Programme (Project WIN). Project WIN was developed by Roberts, Yeomans and Ferro-Almeida (2007) and aims to teach students strategies for fair negotiation when in conflict with others as well as tools for establishing a cooperative classroom environment. Project WIN encourages students to develop classroom ground rules that all students are to abide by in order to foster an atmosphere of cooperation. During sessions, students engage in practice opportunities to learn how to effectively work as a team in order to reach common goals. Taught in a classroom setting, the classroom teacher encourages students to generate strategies to distract from anger and skills for how to relax when feeling angry. Students also learn skills in remaining objective when in a situation of conflict and are encouraged to practice selecting the most appropriate problem solving skill for specific situations. Group discussions, opportunities to generate individual ideas and the use of role plays and games are all incorporated into each session (Roberts, White, & Yeomans, 2004).

In a study by Roberts et al. (2007), Project WIN was delivered to students aged between ten and eleven years. The study targeted student levels of violence and school-wide levels of violent incidents with the goal of seeing established levels decrease following Project WIN. Students were taught skills such as how to listen, how to manage anger, speaking in “I” statements, how to express needs in a situation of conflict and how to bring about fair solutions for both parties. A semi-structured student interview was conducted post-

intervention to measure effects. Results indicated that following participation in Project WIN students chose more constructive and effective ways for dealing with conflict and levels of violent incidents in the intervention school dropped.

The Conflict Resolution Programme (CRP). The CRP (Shuval et al., 2010) was developed through collaboration between several community groups who were invested in preventing violence and promoting health. The CRP is a school-wide programme that teaches strategies to all students for use in situations of conflict that are peaceful rather than violent. The CRP aims to reduce the likelihood that verbal and physical aggression is the chosen method for resolving conflict. The CRP targets personal characteristics that may contribute to the use of violence and is delivered using role plays and teaching opportunities during which students learn and practice skills (Shuval et al., 2010).

Shuval et al. (2010) aimed to investigate whether the CRP would lead to improved conflict resolution strategy use, decreased levels of violence and reduced feelings of hostility and hopelessness. The CRP was delivered to students aged between nine and ten years who attended three public elementary schools. Students were taught strategies for how to cope when feeling angry, effective listening, clear communication and owning personal feelings. The authors modified a validated assessment tool to create a student self report measure in order to assess intervention effects. Across all three schools there was little positive impact and no changes were reported for improved conflict strategy use. More importantly, results indicated that levels of conflict related self efficacy decreased while the likelihood of engaging in violence increased.

Urban Improv Programme (UI). The UI is a theatre based programme that was developed in 1992 (Mages, 2004) and utilises theatre and improvisation as a tool for teaching conflict resolution skills to students in community based sessions. This programme was designed for students ranging from primary school through to high school age. The basic UI

programme is traditionally delivered to school students in a community setting by trained professionals and the comprehensive UI has an additional teacher component which integrates aspects of classroom management. The UI takes a preventative approach to violence and targets conflict resolution skills with the aim of enhancing student knowledge of, and use of, relevant skills. The UI sessions that run alongside the teacher component place a strong focus on improving self-regulation skills and offer students the opportunity to rehearse skills. The ability to make sound decisions, developing problem solving skills, learning how to cooperate, identifying personal values and controlling impulses are all skills that students will ideally master following participation in the UI programme. Students receive support in the form of a mentor who offers regular feedback throughout their engagement in the UI (Kisiel et al., 2006, p. 25).

One focus of a study conducted by Zucker et al. (2010) was to measure the impact of the comprehensive UI on both positive and aggressive behaviour in students. The comprehensive UI programme was delivered to students ranging in age from nine to eleven years. The main approach used in the delivery of UI was theatre improvisation which involved students' role playing situations they may encounter that would likely lead to the use of violence. During the role plays, students were encouraged to use conflict resolution skills in place of violence in order to resolve any hypothetical problems. A pre-post intervention design was used to assess programme outcomes. Social skills, problem behaviour and levels of aggression in students were measured at pre-post test intervals using student and teacher reports. Findings indicated no effect for pro-social and aggressive behaviour as assessed by student and teacher reports and only a small effect for pro-social behaviour as assessed by teacher report (Zucker et al., 2010).

Creating a New Generation of Peacemakers Programme (PP). The PP (Allen, 2009) was designed in an effort for the prevention and reduction of violence. The PP was

developed to address the developmental stages and tasks of young children. The focus of the PP is to teach children skills in conflict resolution and, when necessary, how to avoid conflict to keep safe. Skills taught throughout the programme are listen and talk, walk away to keep safe, stop, sit and think, counting to stay relaxed, identifying body feelings and sharing. The skills are taught using language that emphasises peaceful interaction and during sessions children are encouraged to role play each skill in pairs and as a group. Each session involves the use of a puppet which interacts with the children to assist with the consolidation of learning. The puppet is also used to facilitate group discussion and is deemed to be an age appropriate tool that encourages reflection and consolidation of learning in young children. Parental involvement is encouraged throughout the intervention. The PP is taught over a brief period of five sessions and incorporates interactive activities such as making feeling puppets, creating a quilt that children then use to sit on and ‘talk out’ conflicts and making art work that resembles peaceful interactions for display in the classroom (Allen, 2009).

The purpose of a study carried out by Allen (2009) was to assess whether children learnt the core PP conflict resolution skills. The age range of participants was four to six years. Individual sessions maintained a strong focus on peaceful interactions and a peace circle was created to begin and complete each session as to encourage children to talk about, and further consolidate, the information learnt during each session. The six programme skills were taught in interactive sessions and children made feeling puppets, a classroom quilt and art work for the classroom in accordance with the regular PP curriculum. Parents were involved in the completion of homework tasks and received information about the content of each session on a weekly basis. A pre-post test design was used to measure intervention effects. A teacher report was administered to assess how effectively students implemented the core PP skills. The findings indicated that children did learn the skills taught throughout the PP and were able to use these skills effectively in the school setting.

Summary of Conflict Resolution Education Programmes

Thirteen programmes with a focus on teaching children conflict resolution skills reported various effects (Table 1). Cohen's d effect sizes ([ES= d] Cohen, 1988) are typically scaled according to the following categories: small, medium and large. An ES of .20 is regarded as small, an ES of .50 is regarded as medium and an ES of .80 is regarded as large. Effect size calculations were available for eight programmes and ranged from no effect $d = -0.10$ (Shuval et al., 2010) to a large effect $d = 2.2$ (O'Neill et al., 2011) for different outcome variables. All thirteen programmes were delivered to all classroom students. Twelve programmes were delivered within the school setting and one programme (Zucker et al., 2010) was delivered in the community with an additional classroom teacher component.

Five programmes were curriculum-based (Beets et al., 2009; Greenberg et al., 1995; Linares et al., 2005; Neace & Munoz, 2012; O'Neill et al., 2011) and were implemented over the period of one to five school years in comparison to seven programmes which were implemented over five to seventeen weeks (Allen, 2009; Bilgin, 2008; Enright & Knutson, 2003; Güneri & Çoban, 2004; Roberts et al., 2007; Shuval et al., 2010; Zucker et al., 2010). Individual session length ranged from 15 minutes (Beets et al., 2009) to 75 minutes (Zucker et al., 2010) and the intensity of programme delivery ranged from one session per week (Allen, 2009; Zucker et al., 2010) to three sessions per week (O'Neill et al., 2011). All thirteen programmes were implemented alongside the standard school curriculum. In addition to teaching individual children skills, two programmes also targeted the wider school community in an effort to improve the whole school atmosphere (Beets et al., 2009; Shuval et al., 2010) and two programmes also focused on the classroom environment and encouraged the use of strategies to improve the classroom atmosphere and class-wide levels of cooperation (Linares et al., 2005; Roberts et al., 2007).

The number of facilitators used to deliver the thirteen different programmes varied. Ten programmes were delivered by one person; generally the classroom teacher or another school staff member (Beets et al., 2009; Bilgin, 2008; Botvin et al., 2006; Enright & Knutson, 2003; Greenberg et al., 1995; Güneri & Çoban, 2004; Linares et al., 2005; Neace & Munoz, 2012; O'Neill et al., 2011; Roberts et al., 2007), one was delivered by two trained facilitators (Allen, 2009), one used five trained facilitators (Zucker et al., 2010) and one did not specify the required number of trained facilitators (Shuval et al., 2010).

The intervention programmes showed some similarities and differences in the intervention structure as well as in the different skills taught during intervention sessions. Bilgin (2008), Güneri and Çoban (2004), Roberts et al. (2007) and Shuval et al. (2010) implemented programmes that were similar in terms of the intervention skills and structure. As part of the CRT, CTP, Project WIN, and CRP programmes the negotiating, compromising, perspective taking, problem solving and anger management strategies were very specific to resolving interpersonal conflicts. Children were taught sequential and formulaic steps to follow in a structured manner when in conflict with others in order to effectively resolve the situation.

The PAP, LST, SSC, MMH, and UI (Beets et al., 2009; Botvin et al., 2006; Neace & Munoz, 2012; O'Neill et al., 2011; Zucker et al., 2010) were focused on preventing violence through developing conflict resolution skills and improving social and emotional capacities in order for children to improve their character and social competence. The self-regulation, stress management, impulse control, alcohol and drug, and conflict resolution skills were delivered in the context of developing healthy strategies for maintaining individual health and well-being. Conflict resolution strategies were not the sole focus of these programmes but instead were taught alongside and in conjunction with the other skills.

A goal of the SSC, the MMH and the PP programmes (Allen, 2009; Neace & Munoz, 2012; O'Neill et al., 2011) was to provide early intervention in order to reduce the likelihood of violent behaviour becoming entrenched. By boosting children's social skills and providing children with healthy alternatives to violence, such as effective conflict resolution skills, the likelihood of positive outcomes was believed to increase.

The PAP, LST, and the UI programmes (Beets et al., 2009; Botvin et al., 2006; Zucker et al., 2010) all targeted multiple risk factors involved in the aetiology of violent behaviour and substance use. These were addressed through teaching effective conflict resolution skills as an alternative to aggressive solutions and fostering the development of positive relationships in order to increase positive social skills. The focus on both risk and protective factors in these programmes meant children learnt a broad range of intervention skills.

The PATHS curriculum (Greenberg et al., 1995) and the UMSP (Linares et al., 2005) were strongly focused on developing children's emotion knowledge with a goal of building children's understanding about the connections between emotions and behaviour. The focus of the PP (Allen, 2009) was also on developing children's basic emotion knowledge and learning about self-control in order to give respect to one's own emotions and those of others during times of conflict. The 'stop, sit, think' skill in the PP (Allen, 2009) and the 'traffic light' skill in the PATHS curriculum (Greenberg et al., 1995) were similar in that they both focused on children independently maintaining self-control through generating their own problem solving strategies to manage personal emotions and interactions with others.

Finally, the FI implemented by Enright and Knutson (2003) specifically targeted forgiveness strategies and therefore was fairly different from the other twelve programmes in term of its goals; the skills involved were very limited to the act of forgiving others in an attempt to reduce personal feelings of anger in children.

The measurement of intervention effects varied across intervention studies. Allen (2009) relied on teacher reports of skill acquisition. Beets et al. (2009), Linares et al. (2005), and Zucker et al. (2010) used both teacher and student reports to measure effects. Neace and Munoz (2012) and Roberts et al. (2007) used student self reports and school-wide data while the other seven studies only used student self reports (Bilgin, 2008; Botvin et al., 2006; Enright & Knutson, 2003; Greenberg et al., 1995; Güneri & Çoban, 2004; O'Neill et al., 2011; Shuval et al., 2010). In addition to the variety in measurement tools used, the outcome variables measured in the studies varied. Some studies measured the hypothetical use of skills (Bilgin, 2008; Güneri & Çoban, 2004; Roberts et al., 2007) and the future likelihood of violent behaviour occurring (Shuval et al., 2010), while others measured actual skill ability (Allen, 2009; Greenberg et al., 1995; Linares et al., 2005; Neace & Munoz, 2012; O'Neill et al., 2011; Zucker et al., 2010). Three programmes simply measured the reduction of negative emotions and behaviour targeted by the interventions (Beets et al., 2009; Botvin et al., 2006; Enright & Knutson, 2003).

The research involving conflict resolution intervention programmes generally adhered to rigorous research methods. The use of control groups to compare intervention effects was carried out in ten studies (Allen, 2009; Beets et al., 2009; Bilgin, 2008; Botvin et al., 2006; Enright & Knutson, 2003; Greenberg et al., 1995; Güneri & Çoban, 2004; Linares et al., 2005; O'Neill et al., 2011; Zucker et al., 2010). Some studies used both student and teacher reports to assess outcomes (Beets et al., 2009; Linares et al., 2005; Zucker et al., 2010) and several studies measured more than one outcome variable (Botvin et al., 2006; Greenberg et al., 1995; Linares et al., 2005; Neace & Munoz, 2012; O'Neill et al., 2011; Shuval et al., 2010; Zucker et al., 2010). In addition, the majority of studies involved large sample sizes and the use of both pre-post intervention measurement tools (Allen, 2009; Beets et al., 2009;

Botvin et al., 2006; Greenberg et al., 1995; Neace & Munoz, 2012; O'Neill et al., 2011;
Shuval et al., 2010; Zucker et al., 2010).

Table 1. *Studies of Conflict Resolution Education with Primary School Aged Children*

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>Allen (2009)</p> <p>“Peacemakers” (PP).</p> <p>Purpose/Goal Reduce aggression and increase positive skills.</p>	<p>Behaviour learning theory.</p> <p>Aggressive & violent behaviours are learned and therefore can be changed through education.</p>	<p>Skills: listen, talk, walk away, stop, sit and think, use your words, sharing is caring.</p> <p>Method: opening and closing peace circle, visual aids, skill practice, stories, discussions, puppet use.</p>	<p>Age: 5 (pre K in USA)</p> <p>11 schools</p> <p>15 classrooms</p> <p>n= 101</p> <p>n control= 60</p>	<p>5 x 60 min sessions over 5 weeks</p> <p>Total time: 5 hrs.</p>	<p>2 trainers.</p>	<p>Pre-post test experimental v. control (no PP).</p>	<p>Peacemaker Skill Scale.</p>	<p>Estimated ES:</p> <p>d= .84 (boys)</p> <p>d= .77 (girls)</p> <p>Authors reported good effects.</p>

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Beets et al. (2009) “Positive Action Programme” (PAP) K-12 curriculum. Purpose/Goal Prevent violent behaviour, substance abuse, sexual activity. Improve academics, student behaviours and character development.	Theory of triadic influence.	Skills: decision-making, emotion regulation, empathy, respect. Method: role play, group activities, skill practice.	Age: 10-11 yrs. (US 5 th grade) 20 schools n= 976 control n= 738	140 x 15-20 min sessions per year over 5 yrs (1 st -5 th grade) Time per year: 35 hrs Total time: 175 hrs.	1 class teacher.	Post test experimental v. control (no PAP).	Teacher report. Student self report	Estimated ES: d=.93 (violent behaviour) d= .27 (violent behaviour) Authors reported good effects.

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<p>Bilgin (2008)</p> <p>“Conflict Resolution Training” (CRT) developed by authors.</p> <p>Purpose/Goal To teach integrative negotiation strategies.</p>	<p>Responses to conflict determine the nature of a conflict and it is therefore important to teach constructive conflict resolution strategies.</p>	<p>Skills: talking, “I” statements, explaining feelings, needs identification, perspective taking, problem solving.</p> <p>Method: role plays, groups discussion, reviews, brainstorming.</p>	<p>Age: 4th grade (Turkey)</p> <p>1 school</p> <p>n= 14</p> <p>control n= 14</p>	<p>20 x 30 min sessions</p> <p>2 per week</p> <p>Total time: 10 hrs.</p>	<p>1 researcher</p>	<p>Pre-post test experimental v. control (no CRT).</p>	<p>Student self report developed by authors.</p>	<p>The authors reported no statistically significant results for increased use of constructive conflict resolution strategies following intervention.</p>

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Botvin et al. (2006) “Life Skills Training” (LST). Purpose/Goal Increased personal and social competence. Reduce substance use, drug use and violence.	Prevention through targeting risk factors for drug abuse and violence.	Skills: problem solving, decision making, stress and anxiety management, effective communication, interpersonal skills and assertiveness. Method: group discussion, modelling, feedback, homework.	Age: 6 th grade (USA) n= 2, 374 (20 schools) n control = 2, 484 (21 schools)	15 sessions (length and time frame of session unknown).	1 class teacher.	Pre-post test experimental v. control (no LST).	Student self report questionnaire.	Authors reported reductions in delinquency and fighting.

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<p>Enright and Knutson (2007)</p> <p>“Forgiveness Intervention” (FI) manual developed by the authors.</p> <p>Purpose/Goal Reduce feelings of anger and increase acts of forgiving.</p>	<p>Social cognitive theory of unconditional worth.</p>	<p>Skills: conflict resolution, recognising inherent worth in all people, respect, forgiving others.</p> <p>Method: stories, skill practice.</p>	<p>Age: 1st grade (Ireland)</p> <p>7 schools</p> <p>n= 36 (3 classrooms)</p> <p>n control= 57 (4 classrooms)</p>	<p>17 x 45 min sessions</p> <p>1 per week over 17 weeks.</p> <p>Total time: 12.75 hrs.</p>	<p>1 class teacher.</p>	<p>Pre-post test experimental v. control (no FI).</p>	<p><i>The Beck Anger Inventory for Youth (BANI-Y).</i></p>	<p>ES reported by author:</p> <p>d= .41(Anger)</p>

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<p>Greenberg et al. (1995)</p> <p>“PATHS Curriculum’ developed by the authors.</p> <p>Purpose/Goal</p> <p>Increase understanding, expression and regulation of emotions.</p> <p>Improve social problem solving skills.</p>	<p>ABCD model of development.</p>	<p>Skills: self control, emotion knowledge, problem solving.</p> <p>Method: direct instruction, role play, group discussion, modelling, worksheets.</p>	<p>Age: 6-11 yrs 2nd & 3rd grade (USA)</p> <p>4 schools 30 classrooms</p> <p>n= 83 (regular education). n control= 109 (regular education)</p>	<p>60 x 30 min sessions, 3 per week over 1 school year.</p> <p>Total time: 30 hrs.</p>	<p>1 class teacher.</p>	<p>Pre-post test experimental v. control (no PATHS).</p>	<p><i>The Kusche Affective Interview Revised (KAI-R).</i></p>	<p>Authors reported improvements for number of feeling words, discussion of personal emotional experience, hidden emotions, changes in emotions.</p> <p>No effect was reported for description of emotion recognition cues, understanding simultaneous emotions, reasoning for hidden emotions.</p>

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<p>Guneri & Coban (2004)</p> <p>“Conflict Resolution Training Programme” (CTP) developed by the authors.</p> <p>Purpose/Goal To increase constructive conflict resolution skills.</p>	<p>Constructive strategies for conflict resolution can be taught in a safe environment. Cultural norms impact on conflict resolution strategies.</p>	<p>Skills: listening, distinguishing thoughts from feelings, “I messages”, awareness of conflicts, problem solving, negotiation.</p> <p>Method: role plays, drawing, brainstorming, small group work.</p>	<p>Age: 4th grade (Turkey)</p> <p>1 school n= 28 control n= 26</p>	<p>8 x 45 min sessions 2 per week over two weeks Total time: 6 hrs.</p>	1 school counsellor	Pre-post test experimental v. control (no CRTP).	Written student self report of response to three hypothetical conflict scenarios.	<p>Authors reported effects for knowledge of conflict resolution skills.</p> <p>No effect was reported for use of conflict resolution skills.</p>

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Linares et al. (2005) “The Unique Minds School Programme” (UMSP) K-5 Curriculum. Purpose/Goal Improve social problem solving abilities. Improved classroom social climate and academic learning.	Narrative therapy, bio- psychosocial integrative approaches, general systems theory.	Skills: uniqueness and problem solving, feelings and stress management, kindness, self- management and mind-body connections. Method: interactive sessions, puppets, role plays, group discussion, movement, music, art, drama.	Mean age: 9.58 yrs (US grades 4-5) 2 schools 13 classrooms n= 57 comparison n= 62	Grade 4 (Year 1): 31 x 30 min sessions Total time: 15.5 hrs. Grade 5 (Year 2): 22.5 x 30 min sessions Total time: 11 hrs. Total time across years: 26.5 hrs.	1 class teacher.	Quasi- experimental design/ pre-post test control comparison.	<i>The Morgan- Jinks Student Self Efficacy Scale</i> Student semi structured Interview. <i>The Teacher Observation of Classroom Adaptation- Revised (TOCA- R).</i> <i>The Classroom Observation Rating Scale.</i>	ES reported by author: d= .55 (total self efficacy) d= 1.0 (pro-social problem solving) d= .60 (total social and emotional functioning) d= 1.0 (lack of disruption)

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Neace et al. (2012) “Second Step Programme” (SSC) K-9 curriculum. Purpose/Goal Reduce aggressive behaviours. Increase social skills.	Early intervention.	Skills: impulse control, problem solving, emotion/anger management, empathy. Method: weekly topic, stories, videos, story cards, role play.	Age: 8-10 (US grade 3-5) 12 schools in each of 2 cohorts. n = cohort 1: data for 168 of 922 n= cohort 2: data for 220 of 1,125	35 x 30-60 min sessions 1-2 per week over 9 months Total time approx: 17.5 hrs.	1 class teacher.	Pre-post intervention evaluation between schools and within school.	Second step evaluation of student knowledge/skill level. School data on absences/suspensions.	ES reported by author: d= 1.7 (cohort 1) d= .84 (cohort 2) Authors reported reduction of absences in both cohort 1&2. No significant reduction in suspensions.

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<p>O'Neill et al. (2011)</p> <p>“Michigan Model for Health” (MMH) K-12 curriculum.</p> <p>Purpose/Goal Prevent substance abuse and improve mental health and pro-social behaviour.</p>	<p>Health belief model.</p> <p>Social learning theory.</p>	<p>Skills: health and well being, alcohol and drug safety, nutrition and physical health.</p> <p>Method: skill practice.</p>	<p>Age: 9-10 (grades 4-5 US)</p> <p>52 schools</p> <p>n= 1345</p> <p>n control = 1167</p>	<p>25 x 40-50 min sessions</p> <p>3 per week over 1 year (4th grade)</p> <p>Total time: 20.8 hrs</p> <p>+</p> <p>28 X 40-50 min sessions</p> <p>3 per week over 1 year (5th grade)</p> <p>Total time: 23.3 hrs</p> <p>Total time over 2 yrs: 44.1 hrs.</p>	<p>1 class/ health teacher.</p>	<p>Randomised control trial</p> <p>2 pre-tests</p> <p>2 post-tests</p> <p>2 follow up post-tests</p> <p>All administered at start & end of 5th grade sessions.</p> <p>Control group (no MMH).</p>	<p>Student self report.</p>	<p>Estimated ES:</p> <p>d= 2.2 (aggressive behaviour)</p> <p>d= 1.0 (pro-social behaviour)</p>

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Roberts et al. (2007) “Project WIN programme” Purpose/Goal Teach integrative negotiation skills and create a cooperative classroom environment.	Social interdependen ce theory. Conflict strategies theory.	Skills: listening, anger management, using “I” messages, expressing needs during conflicts, generating fair solutions. Method: discussions, brainstorming, role play.	Age: 10-11 (US 5 th grade) 2 schools n= 19 n control = 15	17 x 45 min sessions Total time: 12.75 hrs.	1 class teacher. 1 observer.	Pre-post evaluation between classroom and within school. Control (no Project WIN).	Student semi structured interviews about 2 hypothetical conflicts. School data on reported violence.	Authors reported increased constructive conflict resolution strategy use. Authors reported lower incidence of violence.

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<p>Shuval et al. (2010)</p> <p>“Conflict Resolution Programme” (CRP) developed by the authors.</p> <p>Purpose/Goal</p> <p>Reduce likelihood of violence and negative emotions associated with conflict.</p> <p>Increase conflict resolution abilities.</p>	<p>Social cognitive theory problem-solving model.</p>	<p>Skills: non-violent conflict resolution options.</p> <p>Method: didactic lessons, role playing.</p>	<p>Age: 9-10 (US grades 4&5)</p> <p>3 schools</p> <p>n= 165</p>	<p>5 x 45-50 min sessions</p> <p>Total time</p> <p>Approx: 4.16 hrs.</p>	<p>Experienced mediators</p>	<p>Pre-post test.</p>	<p>Student self report developed by the author.</p>	<p>ES reported by author:</p> <p>d= -.10 (school 1)</p> <p>d= .23 (school 2)</p> <p>d= .13 (school 3) (conflict self-efficacy).</p> <p>d= -.06 (school 1)</p> <p>d=.05 (school 2)</p> <p>d= -.30 (school 3) (Probability of violence).</p>

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Zucker et al. (2010) “Urban Improv” (UI) developed by authors. Purpose/Goal Reduce aggressive behaviours and increase pro-social behaviour and academic engagement.	Theatre-based strategies increase engagement and learning.	Skills: decision- making, conflict resolution, problem solving, impulse control. Method: interactive theatre improvisation & teacher curriculum.	Age: 9-11 (US grade 4) 6 schools 15 classrooms n=184 control n=76	Comprehensive UI: 9 x 75 min sessions 1 per week + 120 min weekly teacher curriculum Total time: 29.25 hrs.	1 director, 4 facilitator, 1 class teacher.	Pre-post test experimental v. control (no UI).	<i>Social Skills Rating System student (SSRS).</i> <i>Aggression Questionnaire Student (AQ).</i> <i>Social Skills Rating System- Teacher (SSRS- T).</i>	Estimated ES: d= .12 (pro-social) d= .20 (aggression) d= .46 (pro-social) d= .17 (aggressive/disrup tive behaviour)

Mindfulness Programmes with Primary School Aged Children

Fourteen intervention studies (Table 2) were identified that taught children strategies for improved self-regulation through the use of mindfulness-based skills.

Mindful Schools (MS). The underlying premise of the MS programme (<http://www.mindfulschools.org>) is that increased self-regulation and attention-control abilities in students leads to a more positive classroom environment and a positive classroom environment supports the learning and development of young children. The MS programme embraces the core principles of mindfulness which involve directing awareness to the present moment and paying attention with purpose (Kabat-Zinn, 2005). The MS programme was designed for implementation with kindergarten aged children through to grade five of elementary school. The concept that through mindfulness one can develop the ability to respond in a thoughtful manner rather than from a reactive position underlies the primary goal of the elementary school programme. The MS programme teaches skills for breathing, listening, noticing body sensations and thought and emotion identification (Black & Fernando, 2013).

The MS programme was delivered in one public elementary school as part of a pilot study carried out by Black and Fernando (2013). The age range of participants was not specified however, participants were enrolled in kindergarten through to sixth grade. Sessions focused on practical exercises that required students to complete tasks such as still-quiet breathing, scanning the body for sensations, noticing emotions as well as locating the feeling in the body, for example, noticing anxiety symptoms through the presence of sweating and/or a racing heart beat, walking and eating while paying close attention to every aspect of the task and visualising various situations and feelings. Classroom-based practice opportunities outside of intervention sessions were implemented in order to increase the generalisation of

skills. Intervention effects were assessed via pre-post test. Findings indicated small effects for increased care for others and improved self-control abilities following the MS intervention. These effects remained evident at seven week follow-up.

In a second pilot study by Liar and Diaz (2010), the MS programme was delivered to children enrolled in a summer programme. The mean age of children was 9.5 years. Children were assigned to an experimental group or control group by random assignment. The control group children were delivered a health education programme that focused on promoting healthy routines such as eating and exercising regularly as well as the effective management of stress. In the experimental group, the MS was delivered over the period of two weeks in short 15 minute sessions. Each session was followed by an opportunity for children to reflect on the session content. A pre-post test experimental design was used to assess intervention effects. Findings indicated significant reductions in symptoms of depression and anxiety following participation in the MS.

Mindfulness Training (MT). The MT programme was developed by Carboni, Roach and Fredrick (2013) and utilised many strategies taught in the Mindfulness-Based Stress Reduction Programme ([MBSR] Saltzman & Goldin, 2008). The session content of the MT includes the use of a pre-recorded CD to teach children mindfulness skills as well as group discussion and skill practice exercises to assist with the learning and integration of skills (Carboni et al., 2013). Children learn skills in developing awareness and paying attention. The formal practice of mindfulness and the exploration of themes related to the practice exercises are a core focus of the MT.

In a study by Carboni et al. (2013) four eight-year old children with diagnoses of ADHD from a public elementary school participated in the MT programme. One on one sessions conducted by a psychologist were delivered individually to each child for up to 45 minutes twice weekly. Children were exposed to mindfulness practice exercises through

listening to a mindfulness CD and they participated in reflection and discussion with the instructor during each session. Intervention effects were measured using a single-case study design which included a baseline phase, intervention phase, and follow-up phase. Parents reported on a behaviour rating scale that measured levels of hyperactivity and inattention at pre-post intervention phases. Direct observation data was collected during class time during all three phases of the study and the rate of on-task behaviour was recorded for each child for the duration of the observation. Results suggested only small improvements in levels of on-task behaviour and hyperactivity. No effect for the reduction of inattentive behaviour was reported.

Mindful Awareness Practices Curriculum (MAPs). The MAPs curriculum was developed to target the developmental needs of children and is based on mindfulness exercises previously trialled with adults (Flook et al., 2010). A primary goal of the MAPs curriculum is for children to develop an awareness of thoughts, feelings, and the self in relation to others as well as to develop the ability to direct attention. Interactive learning is encouraged throughout sessions and mindfulness skill practice is a core aspect of each session. Typically the curriculum is delivered over eight weeks with two sessions occurring each week.

In a study by Flook et al. (2010), the outcomes of the MAPs curriculum on levels of executive functioning in children from four elementary school classrooms was assessed. The age range of participants was seven to nine years. Children received the eight week MAPs curriculum twice a week for approximately 30 minutes. Children participated in mindfulness practice exercises while sitting and lying down. These mindfulness exercises were shorter at the beginning of the curriculum and extended in length as the intervention progressed in order to increase the length of practice. The mindfulness exercises were accompanied by short games that focused on building skills for working effectively as a team and showing kindness

toward others. A pre-post experimental group study design was used to assess intervention effects. Findings indicated that children showed improved levels of behaviour regulation specific to executive functioning following participation in the MAPs curriculum.

Mindfulness Meditation Programme (MM). The MM (Joyce, ETTY-Leal, Zazryn, Hamilton, & HASSED, 2010) was developed to align with core mindfulness principles and aims to support the promotion of student mental health through the delivery of a school-based programme. The goal of the MM is for students to engage in exercises that foster ongoing meditation practice and the development of mindfulness skills. Core skills taught throughout the programme include paying attention to the surrounding environment and developing an awareness of the body; both skills are taught through the practice of stillness meditation. Responses to stress, awareness of the breath, knowledge of emotions as well as their connection with words and observing thoughts are additional skills taught throughout the programme. The MM session structure includes the opportunity for discussion within a group setting, consideration of session themes and structured mindfulness practice (Joyce et al., 2010).

A pilot study carried out by Joyce et al. (2010) investigated whether developing skills in 'being mindful' through participation in the MM would be beneficial for the improved mental health of students aged ten to thirteen years. Mental health, a term used broadly in the study, included anxious behaviour, depressive symptoms and conduct problems. Flexibility was encouraged in delivering the MM and teachers were able to modify the length of sessions according to the needs of their students. Extra practice opportunities were offered outside of the intervention sessions and homework tasks were set for students to complete. A pre-post design was utilised to assess intervention effects. Student self reports measured depressed symptoms, total difficulties and pro-social skills. Qualitative data was also collected from classroom teachers to evaluate the usefulness and applicability of the MM. Results indicated a

good effect for the reduction of depressed symptoms and total difficulties. However, no effect was reported for pro-social skills. Qualitative data indicated that the intervention was beneficial for students.

Move into Learning (MIL). The MIL programme developed by Klatt, Harpster, Browne, White, and Case-Smith (2013) was created for implementation with elementary school students and teachers. The programme was primarily designed for the provision of simple and easy to use strategies to all children in classrooms so they could achieve improved stress management capabilities and increased feelings of self-efficacy. The MIL combines skills from previous mindfulness and yoga programmes to offer age appropriate strategies for young children. Children learn skills to cultivate a relaxed state through the practice of breathing and yoga exercises which are accompanied by music. Art activities are also incorporated into individual sessions as a way of fostering creativity and an improved sense of self-esteem.

Klatt et al. (2013) carried out a pilot study in order to assess the effectiveness of the MIL programme with third grade elementary school students from one public school. The mean age of participants was 8.5 years. Children participated in weekly sessions focused on breathing techniques and yoga postures to promote an understanding of the connections between the breath and emotions. Children also engaged in regular art and drawing activities that targeted reflection and acknowledgement of personal strengths and abilities. A pre-post single group design assessed intervention effects. Findings indicated that the intervention was appropriate and useful for teachers. Students showed moderate improvements in general Attention Deficit Hyperactivity Disorder (ADHD) symptoms and moderate reductions in levels of hyperactivity and inattention. A small effect only was reported for oppositional behaviour. All effects were maintained at two month follow-up.

Climb Up Programme (CU). The CU was developed by Mehta et al. (2011) as an alternative to the traditional approach of medication and behaviour therapy in the treatment of childhood ADHD. The main goal of the CU is to improve the learning and behaviour of students involved. The CU was also designed with the aim of providing a cost effective method to address the more specific needs of children living with a diagnosis of ADHD. The CU combines yoga, meditation and aspects of play therapy into one single programme.

Mehta et al. (2011) conducted a study with an aim to improve both positive behaviour and academic abilities of children aged between six and eleven years with a diagnosis of ADHD. Students were taught specific skills for how to perform yoga postures and how to complete breathing exercises. Individual sessions included the use of group discussion and play therapy to assist the learning process. A pre-post design was used to assess intervention effects. Parent and teacher reports assessed aspects of behaviour related to ADHD including whether participants showed the ability to maintain healthy peer relationships and follow instructions. Levels of disruptive behaviour were also measured. Following participation in the CU programme, results indicated that student's showed reductions in all areas assessed. Breathing and yoga posture measurements showed that students did learn the skills.

Mindfulness and Yoga Programme (MYP). The MYP was developed (Holistic Life Foundation as cited in Mendelson et al., 2010) in an effort to provide youth with tools for improved well-being and academic achievement. The MYP involves teaching yoga and mindfulness strategies through structured practice exercises. Trained instructors encourage students to engage in formal meditation practice and yoga postures while offering education about how the techniques assist to reduce stress and improve the quality of interpersonal relationships.

Mendelson et al. (2010) piloted the MYP to assess whether it was suitable for implementation in a school setting. Fifty-one elementary school children from the fourth and

fifth grades were assigned to an experimental or control group and experimental group children were delivered weekly MYP 45 minute long sessions over 12 weeks. Children participated in formal practice of mindfulness and yoga exercises that increased in difficulty throughout the duration of the intervention. A pre-post experimental design was followed to assess intervention effects. Findings indicated a small effect for trust in friends and for reductions of impulsive action in response to social stress. No effect was reported for improvements in depressed symptoms, positive affect and communication with friends. Gender was controlled for and no gender effects were reported.

Promoting Responsibility through Education and Prevention Programme

(PREP). The PREP programme (Sale, Weil, & Kryah, 2012) was designed as an after school programme for delivery in the community with children of elementary school age. PREP takes a preventative approach toward substance abuse and behaviour characterised by violence. The PREP programme focuses on increasing protective factors and decreasing factors that pose risk. PREP aims to provide education to students about the risks of both engaging in violence and using substances and the programme highlights the undesirable outcomes that students are likely to face should they engage in these behaviours. A goal of the programme is to teach students skills for managing stress, increased self control and effective anger management. In learning and later implementing these skills, it is hoped that students reduce their level of engagement in behaviours that are aggressive and violent, act less upon impulse, reduce rates of academic failure and reduce levels of school truancy (Sale et al., 2012).

Sale et al. (2012) assessed whether students' positive social skills improved following the PREP programme. Participants were drawn from the fourth and fifth grades of elementary schools and were referred to the PREP programme due to being at risk for substance use and violence. Skills for prevention were taught with an educational focus on the possible harmful

effects and likely negative outcomes of substance use and violence. Skills in anger management were taught through visualisation exercises and the practice of relaxation strategies. In addition to the above, a strong focus was placed on improving cooperation skills through yoga practice, art and cooking activities. A pre-post comparison design was used to assess intervention effects. Social interaction was measured through teacher observations according to how cooperative, socially engaging, confident and independent a student was in their interactions with others. Findings indicated that students' social skills and the quality of students' interactions significantly improved following the PREP programme.

The Mindfulness Education Programme (ME). The ME programme (Schonert-Reichl & Lawlor, 2010) aims to target feelings of optimism, the experience of pleasant emotions and student goal setting abilities through improving self-regulatory abilities, the reduced experience of stress and increased levels of self awareness. The ME programme is typically delivered in a classroom setting by the class teacher. Students engage in practice exercises throughout the programme sessions as well as additional practice outside of the intervention sessions to increase skill generalisation. ME skills include developing the ability to listen to and pay attention to breathing, increasing one's awareness of thoughts and feelings, eliminating negative thoughts and acknowledging both oneself and others (Schonert-Reichl & Lawlor, 2010).

Schonert-Reichl and Lawlor (2010) carried out a study in which the ME programme was delivered in 12 elementary schools. The effects of the ME programme on student levels of optimism, emotion regulation, positive and negative emotion experience, aggression and empathy were measured. The age range of participants was nine to thirteen years ($M=11.1$). During sessions and additional practice opportunities students practiced sitting quietly while focusing on the breath and simultaneously listening to particular sounds, cultivating an awareness of body sensations, thoughts, and feelings and dealing with negative feelings and

thoughts in a way that promoted positivity. A pre-post experimental design was followed in order to assess intervention outcomes. Student levels of aggression, emotion regulation, empathy and compassion for others were assessed by a teacher report. Findings indicated that levels of compassion and empathy for others increased following participation in the ME programme. These findings were reported alongside reductions in levels of aggression and unregulated behaviour.

Mindfulness-Based Cognitive Therapy for Children (MBCT-C). Mindfulness-Based Cognitive Therapy ([MBCT] Segal, 2002) incorporates aspects of cognitive behaviour therapy and mindfulness into one programme. Initially, the programme was developed for delivery with adults who live with depression. However, the programme exists in an adapted form for use with children ([MBCT-C] Lee, Semple, Rosa, & Miller, 2008; Semple, Lee, Rosa, & Miller, 2010). The MBCT-C uses mindfulness practice as the primary vehicle for learning and has four primary aims. The first aim is for children to reach an understanding that thoughts are both separated from and connected with each other. Secondly, children reach an understanding of how emotions, feelings and the body interact to influence each other and exist in relationship with each other. The third aim of the programme is for children to master the ability to describe an experience separate from any judgements they may have about that specific experience. Lastly, children learn to categorise and label thinking as past, present or future. Children are encouraged to orientate their thoughts to the present moment in order to cultivate present moment awareness. The MBCT-C emphasises repetition of skill practice throughout sessions and integrates homework tasks in order to increase generalisation of skills (Lee, Semple, Rosa, & Miller, 2008).

The purpose of a pilot study conducted by Lee, Semple, Rosa and Miller (2008) was to assess whether the MBCT-C would lead to reductions in both internalising symptoms and externalising behaviour for participants aged between nine to twelve years. Each session

involved children engaging in a formal meditation practice followed by group discussion and review of a weekly homework task. As part of the formal practice, sensory experiences such as eating mindfully, smelling mindfully and touching mindfully were incorporated to encourage the experience of being aware of the present moment. Parents were encouraged to become involved in the set homework tasks and participants were rewarded for homework completion and positive session participation. A pre-post test design was employed to assess intervention effects. Findings indicated only minor improvements for externalising behaviour and internalising symptoms of anxiety. No effect was reported for depressed symptoms. Qualitative data suggested improvements in anger management.

A further study conducted by Semple et al. (2010) assessed whether the MBCT-C would show improvements for levels of attention, anxiety and behaviour problems in participants with reading difficulties aged between nine and thirteen years. Sessions involved sensory exercises, games, movement exercises, breathing exercises, group discussions and a review of weekly homework tasks. Parental involvement was incorporated into the intervention process; therapists met with parents both pre and post intervention to inform them of the content and goals as well as expected outcomes. Parents were also encouraged to take part in the homework exercises at home with their children during the intervention. A randomised pre-post test control trial design was followed to measure outcomes. The study findings indicated only small improvements in levels of behaviour problems and minor reductions in anxiety symptoms. A small effect was also reported for improvements in attention problems.

Mindfulness Training Programme (MTP). Providing teachers with strategies for cultivating mindfulness in their own lives in line with the belief that regular mindfulness practice on the teachers' part would transfer to improved student behaviour was an underlying goal in the development of the MTP (Singh, Lancioni, Winton, Karazsia, & Singh, 2013). The

MTP incorporates core mindfulness strategies into a programme that is delivered by therapists for individual teachers during weekly one on one sessions. Teachers learn meditation skills, strategies for developing awareness and skills that assist with being present in the moment. The programme is tailored to the needs of teachers and places emphasis on how teachers are, through practice, able to incorporate mindfulness skills and strategies into their daily work in classroom settings (Singh et al., 2013).

Singh et al. (2013) conducted a study involving three special education preschool classrooms in which the classroom teachers received the MTP. A goal of the study was to investigate whether the behaviour of 18 students with mild intellectual disability diagnoses showed improvement following delivery of the MTP. Three teachers with six participating students in each of their classrooms were delivered the MTP in weekly two hour long one to one MTP sessions for the period of eight weeks. Participating teachers were encouraged to practice the skills from each week's session at home. A single-case study design was used to measure intervention effects. The study phases included baseline phase, mindfulness training phase and a mindfulness practice phase. Measures of student behaviour were collected during all phases of the study using repeated measures. Six teacher aides collected data via direct observation on the 18 students and provided measures of maladaptive behaviour, compliance with the teacher and positive, negative, and neutral social interaction with peers. The findings indicated that students showed reduced levels of maladaptive behaviour and increased compliance with teachers. Decreased levels of negative peer interaction and increased levels of neutral interaction were also reported. However, students showed no change in their positive social interactions with peers.

Attention Academy programme (AAP). The primary focus of the AAP (Napoli, Krech, & Holley, 2005) is for students to achieve an improved quality of life. An underlying assumption of the AAP is that if students are able to increase and maintain their levels of

attention it is likely their levels of stress will reduce and therefore, their ability to focus and learn will improve. Students are taught in a regular classroom setting how to bring increased attention to an experience, how to cultivate non-judgemental awareness and how to approach experiences with a sense of novelty. Activities included in the AAP aim to give students the skills to direct and hold their attention on the breath, draw attention to the present moment during stillness and movement and to notice when bodily senses are stimulated. Session duration can be modified for delivery to align with the time available for implementation.

Napoli et al. (2005) carried out a study with the aim of assessing changes in student levels of attention following the delivery of the AAP. Students aged six to eight years learnt how to follow the breath's movement through the body, how to direct attention to specific sounds inside and outside the body and how to refine awareness skills through sensory stimulation. Breathing exercises, movement exercises, sensory exercises and group discussions made up individual session structure. A pre-post group comparison design was used to assess intervention effects. Student levels of attention, hyperactivity, social skills and oppositional behaviour were measured through teacher reports. Two student self-report measures assessed participant levels of test taking related anxiety and ability to focus attention. Findings indicated good effects for improved attention abilities and a small effect for pro-social skills and anxiety symptoms specific to test taking.

Summary of Mindfulness Programmes

The fourteen mindfulness based studies (Table 2) reported a range of effects from $d = .04$ (Mendelson et al., 2010) to $d = 1.8$ (Sale et al., 2012). All intervention programmes provided skills training to all children and were delivered alongside the regular school curriculum except for the teacher training implemented by Singh et al. (2013). The total time of instruction ranged from a brief one and a half hours taught over the period of two school weeks (Liehr & Diaz, 2010) to a total of 60 hours taught over ten school weeks (Sale et al.,

2012). Session length ranged from 10-15 minutes (Black & Fernando, 2013; Flook et al., 2010; Liehr & Diaz, 2010) through to 120 minutes (Sale et al., 2012). All programmes were delivered within a time frame of 12 weeks except the AAP. This intervention was delivered over the course of 24 weeks (Napoli et al., 2005). The intervention programmes were generally delivered by trained instructors who were not school staff (Black & Fernando, 2013; Klatt et al., 2013; Lee et al., 2008; Liehr & Diaz, 2010; Mendelson et al., 2010; Napoli et al., 2005; Sale et al., 2012; Semple et al., 2010; Singh et al., 2013). However, four programmes were taught by school staff; typically the classroom teacher who had received training in mindfulness prior to implementation (Carboni et al., 2013; Joyce et al., 2010; Mehta et al., 2011; Schonert-Reichl & Lawlor, 2010).

The session structure and intervention skills varied across the fourteen mindfulness programmes. Nine programmes appeared to focus predominantly on the traditional practice of mindfulness exercises and each session was structured so that children and teachers spent most of the session time engaging in formal meditation and/or breathing exercises (Black & Fernando, 2013; Carboni et al., 2013; Flook et al., 2010; Lee et al., 2008; Liehr & Diaz, 2010; Mendelson et al., 2010; Napoli et al., 2005; Semple et al., 2010; Singh et al., 2013). Group discussions generally followed the mindfulness practice in these programmes with the aim of reflecting on how the skills might be integrated into daily life but discussion time was typically shorter than the formal practice aspect of the session. The skills taught in the nine programmes were similar and involved focused breathing and listening, sitting, lying, and walking meditation, sensory exercises, body awareness and attention to the present moment. Three programmes incorporated skill practice into each session but seemed to have a broader focus on aspects of mindfulness and how it related to general well-being in life (Joyce et al., 2010; Sale et al., 2012; Schonert-Reichl & Lawlor, 2010). In these programmes mindfulness and/or meditation practice was typically integrated with discussion of wider themes and

strategies such as emotion knowledge, problem solving, decision making, anger management, affirmations, team work and goal setting. The mindfulness skills in these programmes were similar to those delivered in the nine programmes mentioned above and included focused breathing and listening, sitting or lying meditation, and body awareness. Three programmes incorporated yoga practice (Klatt et al., 2013; Mehta et al., 2011; Sale et al., 2012) and two included additional art activities closely related to the yoga practices (Klatt et al., 2013; Sale et al., 2012).

Intervention effects were generally assessed through teacher reports of student behaviour (Black & Fernando, 2013; Carboni et al., 2013; Flook et al., 2010; Joyce et al., 2010; Klatt et al., 2013; Lee et al., 2008; Mehta et al., 2011; Napoli et al., 2005; Sale et al., 2012). Four of these studies also included parent reports of student behaviour in addition to the teacher reports (Carboni et al., 2013; Flook et al., 2010; Lee et al., 2008; Mehta et al., 2011). Flook et al. (2013) and Sale et al. (2012) limited the assessment of intervention effects to one outcome variable; the remaining twelve studies measured more than one variable.

Finally, the methodology of the mindfulness research appears rigorous in terms of the use of control groups for comparison of intervention effects and control groups were included in five studies (Flook et al., 2010; Liehr & Diaz, 2010; Napoli et al., 2005; Schonert-Reichl & Lawlor, 2010; Semple et al., 2010). However, the sample sizes were comparatively small in five of the group studies (Flook et al., 2010; Lee et al., 2008, 2008; Liehr & Diaz, 2010; Sale et al., 2012).

Table 2. *Studies of Mindfulness Programmes with Primary School Aged Children*

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>Black and Fernando (2013)</p> <p>“Mindful Schools” (MS) K-5 Curriculum.</p> <p>Purpose/Goal</p> <p>Improve learning, emotion regulation, conflict resolution, and attention control. Reduce impulsive reactions.</p>	<p>Understanding emotions and thoughts leads to improved coping and management of stressors in life.</p>	<p>Skills: listening to surrounding sounds, breathing, body scan, thought and feeling distinction, body felt emotion identification, mindful walking, mindful eating.</p> <p>Method: practice exercises, group discussion, visualisation.</p>	<p>Age: K-6th</p> <p>Grade students (US).</p> <p>1 school</p> <p>17 classrooms</p> <p>n= 403</p>	<p>Group 1 (MS)</p> <p>15 x 15 min sessions</p> <p>3 per week</p> <p>Over 5 weeks</p> <p>Total time: 3.75 hrs.</p> <p>Group 2 (MS+)</p> <p>22 x 15 min sessions</p> <p>3 per week for 5 weeks and 1 per week for 7 weeks</p> <p>Over 12 weeks</p> <p>Total time: 5.5 hrs.</p>	<p>2 trained instructor.</p>	<p>Pre-post pilot study.</p>	<p><i>The Student Behaviour Rubric</i></p>	<p>ES reported by author:</p> <p>Caring and respect for others: d= .26 (MS) d= .35 (MS+)</p> <p>Self-control: d= .32 (MS) d= .42 (MS+)</p>

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>“Mindfulness Training” (MT).</p> <p>Carboni et al. (2013)</p> <p>Purpose/Goal Increase daily use of mindfulness. Respond rather than react to situations.</p>	<p>Mindful experience of thoughts, feelings, and body sensations leads to reductions in feelings of overwhelm and stress.</p>	<p>Skills: focusing attention, awareness/ observation of thoughts and feelings, responding mindfully.</p> <p>Method: skill practice, listening to CD, one on one discussion.</p>	<p>Age: 8 yrs. (ADHD diagnosis) 1 school. n= 4</p>	<p>30 - 45 min sessions 2 per week over approximately 6 weeks Total time: 4.5 hrs.</p>	<p>1 school psychologist.</p>	<p>Single-case multiple baseline with follow-up across participants.</p>	<p><i>Behaviour Assessment System for Children, Second Edition (BASC-2)</i> (Teacher and parent rating scales).</p> <p>Direct observation of on-task behaviour; 15 min/ 3 per week.</p>	<p>Authors reported:</p> <p>Small effect for reduction of hyperactive behaviour. No effect for reduction of attention problems.</p> <p>Small effect for increased on-task behaviour.</p>

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>Flook et al. (2013)</p> <p>“Mindful Awareness Practices” (MAPs) developed by the authors.</p> <p>Purpose/Goal Improved awareness and attention to experience.</p>	<p>Awareness supports physical and mental health.</p>	<p>Skills: self awareness, regulation of attention, thought and feelings.</p> <p>Method: games, meditation practice.</p>	<p>Age: 7-9 yrs. 2nd & 3rd grade (USA) 1 school, 4 classrooms n= 32 n control = 32</p>	<p>16 x 10-30 min sessions 2 per week over 8 weeks Total time approx: 4.8 hrs.</p>	<p>Not reported.</p>	<p>Pre-post experimental v. control (silent reading).</p>	<p><i>Behaviour Rating Inventory of Executive Function (BRIEF)</i> (Teacher and parent reports).</p>	<p>Authors reported statistically significant effects for improvements in executive functioning abilities.</p>

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
Joyce et al. (2010) “Mindfulness meditation programme” (MM). Purpose/Goal Improved mental health.	Buddhist traditions of mindfulness.	Skills: relaxation, body/breath awareness, exploration of stress responses, stillness meditation. Method: group discussion, exploration of themes, meditation practice.	Age: 10-13 yrs. (AUS year 5-6) 2 schools, 5 classrooms n= 141	10 x 45 min sessions Total time: 7.5 hrs.	1 class teacher.	Pre- post evaluation.	<i>Strengths and Difficulties Questionnaire (SDQ).</i> <i>Children’s Depression Inventory (CDI).</i> Teacher qualitative feedback.	ES reported by author: d= .84 (total difficulties) d=. 13 (pro-social) d= .62 (depressed symptoms) Beneficial for students.

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
Klatt et al. (2013) “Move into Learning” (MIL) developed by the authors. Purpose/Goal Stress reduction and improved learning.	Self-reflection and self-regulation improves learning and stress management abilities.	Skills: self-awareness, mindful breathing. Method: yoga postures, art activities, appreciative enquiry.	Mean age: 8.5 yrs. 1 school, 2 classrooms n= 41	8 x 45 min sessions 1 per week over 8 weeks. Total time approx: 3.6 hrs.	Three trained graduate students.	Pre-post test single group design with two classrooms; follow –up with one classroom.	<i>Connor’s Teacher Rating Scale-Revised, Short Form (CTRS-R:S).</i> Semi structured interviews with classroom teachers.	ES reported by author: d= .56 (ADHD Index) d= .42 (Hyperactivity) d= .53 (Cognitive Attention) d= .22 (Oppositional Behaviour). Teachers found the programme feasible and acceptable.

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>Lee et al. (2008)</p> <p>“Mindfulness-Based Cognitive Therapy” (MBCT-C).</p> <p>Purpose/Goal Reduction of internalising and externalising symptoms.</p>	<p>Meditation and awareness can support healthy management of negative experiences.</p>	<p>Skills: awareness of thoughts, feelings and body in interaction with environment.</p> <p>Method: small groups, sitting meditation, discussion.</p>	<p>Age: 9-12 yrs. (US grades 4-6) Remedial reading programme n= 17</p>	<p>12 x 90 min sessions 1 per week Total time: 18 hrs.</p>	<p>2 therapists.</p>	<p>Pre-post test.</p>	<p><i>Child Behaviour Checklist (CBCL).</i></p> <p><i>Multidimensional Anxiety Scale for Children (MASC).</i></p> <p><i>State-Trait Anxiety Inventory for Children (STAIC).</i></p> <p><i>Reynolds Child Depression Scale (RCDS).</i></p> <p>Participant and parent questionnaire.</p>	<p>ES reported by author:</p> <p>d= .28 (externalising behaviour)</p> <p>d= .35 (anxiety)</p> <p>d= .40 (anxiety)</p> <p>d= .19 (depressed symptoms)</p> <p>Improved anger management.</p>

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
Lierh and Diaz (2010) “Mindful Schools” (MS) K-5 curriculum developed by Mindful Schools. Purpose/Goal Reduce depression and anxiety symptoms.	Increased awareness improves self- management of attention.	Skills: listening to sounds, breathing, body scan, thought and feeling distinction, body felt emotion identification, mindful walking, mindful eating. Method: practice exercises, group discussion, visualisation.	Mean age: 9.5 yrs. n= 9 n control= 9	10 x 15 min sessions, 1 per day over 2 weeks Total time approx: 1.5 hrs.	1 trained practition er.	Pre-post experimental v. control (health education intervention)	<i>Short Mood and Feelings Questionnaire (SMFQ).</i> <i>State Anxiety Inventory for Children (STAIC).</i>	Authors reported statistically significant effects for reductions in depressed symptoms and anxiety symptoms.

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
Mehta et al. (2011) “Climb Up programme” (CU). Purpose/Goal Improve behaviour and academics in children with ADHD.	Behaviour therapy. Yoga increases levels of dopamine.	Skills: yoga, breathing meditation. Method: yoga postures, breathing exercises, behaviour therapy, group discussion.	Age: 6-11 yrs. n=66 (63 ADHD diagnosis, 3 no diagnoses).	12 x 60 min sessions 2 Per Week over 6 weeks Total time: 12 hrs.	Volunteer high school students & teachers	Pre-post test.	<i>Vanderbilt teacher & parent behaviour questionnaire.</i> Yoga posture score sheet. Breathing meditation.	Authors reported reductions in ADHD symptoms. Children learnt yoga poses correctly. Children mastered skills effectively.

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>Mendelson et al. (2010)</p> <p>“Mindfulness and Yoga Programme” (MYP) developed by Holistic Life Foundation.</p> <p>Purpose/Goal</p> <p>Enhanced attention and awareness abilities for effective stress management.</p>	<p>Improved self-regulation promotes positive outcomes.</p>	<p>Skills: calm breathing, sustained attention, self-awareness, self-regulation.</p> <p>Method: formal mindfulness and yoga practice, group discussion.</p>	<p>4th and 5th grade students.</p> <p>Mean age: 9.7 yrs (4th grade)</p> <p>Mean age: 10.6 yrs (5th grade)</p> <p>4 schools.</p> <p>n= 97</p>	<p>48 x 45 min sessions, 4 per week over 12 weeks.</p> <p>Total time approx: 21.6 hrs.</p>	<p>2 trained instructor.</p>	<p>Pre-post experimental design with focus groups.</p>	<p><i>Responses to Stress Questionnaire (RSQ).</i></p> <p><i>Short Mood and Feelings Questionnaire (SMFQ-C).</i></p> <p><i>Emotion Profile Inventory (EP).</i></p> <p><i>People in My Life (PIML).</i></p>	<p>ES reported by author:</p> <p>d= .38 (impulsive action)</p> <p>d= .13 (depressed symptoms)</p> <p>d= .04 (positive affect)</p> <p>d= .17 (communication with friends)</p> <p>d= .40 (trust in friends)</p>

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
Napoli et al. (2005) “Attention Academy Programme” (AAP). Purpose/Goal Improved quality of life.	Breathing regulates autonomic nervous system.	Skills: increase attention to present experience, non-judgement, “beginner’s eye”. Method: breathing/movement exercises, session de-brief.	Age: 6-8 yrs. (US grades 1-3) 2 schools 9 classrooms n= 97 n control = 97	12 x 45 min sessions Bi-monthly Over 24 weeks Total time: 9 hrs.	2 trainers.	Pre-post control group comparison (control no AAP: reading/quiet time).	<i>ADD-H Comprehensive Teacher Rating Scale (ACTeRS).</i> <i>Test of Everyday Attention for Children (TEA-Ch).</i> <i>Test Anxiety Scale (TAS).</i>	ES reported by author: d= .47 (social skills) d= .60 (selective attention) d= .39 (test anxiety)

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>Sale et al. (2012)</p> <p>“Promoting responsibility through education and prevention programme” (PREP)</p> <p>Manual created by developer.</p> <p>Purpose/Goal</p> <p>Reduce disruptive/ aggressive behaviour, impulsivity, school failure.</p> <p>Increase social skills.</p>	<p>Strengthening protective factors and reducing risk factors leads to lower substance use and violent behaviour.</p>	<p>Skills: conflict resolution, substance use and violence prevention, decision-making, life skills, anger management, self confidence.</p> <p>Method: group lessons, yoga practice, art, cooking.</p>	<p>Age: 9-10 yrs.</p> <p>(US grades 4-5)</p> <p>High risk students</p> <p>n=24</p>	<p>Selected year: 2007</p> <p>30 x 120 min sessions</p> <p>3 per week over 10 weeks</p> <p>Total time: 60 hrs.</p>	<p>Clinical social workers.</p> <p>Volunteer social work students.</p>	<p>Pre-post comparison.</p>	<p>PREP staff and teacher ratings/ behaviour observation.</p>	<p>Estimated ES:</p> <p>d= 1.85 (social skills)</p> <p>Authors reported improvements in social skills.</p>

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>Schorner-Reichl & Lawlor (2010)</p> <p>“Mindfulness Education” (ME) developed by the authors.</p> <p>Purpose/Goal Increased positive feelings and regulatory abilities.</p>	<p>Mindfulness promotes well-being.</p> <p>Positive Psychology.</p>	<p>Skills: focused listening and breathing, awareness of sensations and emotions/thoughts, dealing with negative feelings, acknowledgement of self and other.</p> <p>Method: skill practice, group discussion.</p>	<p>Mean age: 11.10 yrs.</p> <p>12 schools</p> <p>12 classrooms</p> <p>n= 139</p> <p>n control = 107</p>	<p>9 x 50 min sessions</p> <p>1 per week</p> <p>Over 10 weeks</p> <p>Total time: 8.33 hrs.</p>	<p>1 class teacher.</p>	<p>Pre-post control group experimental design.</p>	<p><i>Teachers Rating Scale of Social Competence (TRSC).</i></p>	<p>Estimated ES: d= .37 (social and emotional competence)</p> <p>Authors reported improvements in social and emotional competence.</p>

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
<p>Semple et al. (2010)</p> <p>“Mindfulness-Based Cognitive Therapy” (MBCT-C) developed by the authors.</p> <p>Purpose/Goal Develop mindful attention through meditation.</p>	<p>The observation and non judgement of thoughts, feelings, body sensations leads to improved well-being.</p>	<p>Skills: focusing attention, non-judgemental awareness.</p> <p>Method: sensory exercises, games, movement, meditation practice, drawing and writing.</p>	<p>Age: 9-13 yrs. (Reading problems) n= 13 n control = 12 Open trial data: n= 25</p>	<p>12 x 90 min session, 1 per week over 12 weeks.</p>	<p>1-2 trained therapists.</p>	<p>Pre- post test randomised trial of a two group design.</p>	<p><i>Child Behaviour Checklist: Parent Report Form (CBCL).</i></p> <p><i>Multidimensional Anxiety Scale for Children (MASC).</i></p> <p><i>State-Trait Anxiety Inventory for Children (STAIC).</i></p>	<p>ES reported by author:</p> <p>d= .42 (attention problems) d= .27 (behaviour problems)</p> <p>No statistically significant effect.</p> <p>d= .38 (anxiety)</p>

<u>Author/ Intervention/ Purpose & Goal</u>	<u>Theoretical Base</u>	<u>Skills and Method</u>	<u>Participants</u>	<u>Implementation</u>	<u>Instructors</u>	<u>Study Design</u>	<u>Measurement</u>	<u>Effect Sizes/ Findings</u>
Singh et al. (2013) “Mindfulness Training Programme for Teachers” (MTP). Purpose/Goal Improve student behaviour and interactions through regular meditation by teachers.	Observing, rather than interacting with, thoughts, feelings and perceptions leads to reduced experience of distress.	Skills: meditation, awareness, journaling, beginners mind, being present in the moment. Method: one on one discussion, skill practice, home practice.	Age: 5-8 yrs. Mild intellectual disability diagnoses. n=18 students. Teacher training n= 3.	8 x 60 min sessions, 1 per week over 8 weeks Total time approx: 8 hrs.	1 trained therapist.	Single case multiple baseline design.	Repeated measures: direct observation of children’s maladaptive behaviours, compliance, and social interaction with peers.	Findings reported by author. Reductions in maladaptive behaviour and negative peer interaction. Increase in compliance and neutral peer interaction. No change for positive peer interaction.

Limitations in the Research

The curriculum-based programmes such as the PAP (Beets et al., 2009), PATHS curriculum (Greenberg et al., 1995), SSC (Neace & Munoz, 2012), MMH (O'Neill et al., 2011), and UMSP (Linares et al., 2005) although effective, took a great deal of time to implement which naturally increased the resources required for both the implementation and measurement of each intervention. The UI (Zucker et al., 2010) and the PREP programmes (Sale et al., 2012) required five facilitators to deliver. This high number of facilitator's necessitates an increased amount of time and a higher level of training to ensure these programmes are delivered effectively.

A reduction in problem behaviour does not necessarily help to educate children in alternative choices of behaviour (Bear, 2010). In the research, several studies (Beets et al., 2009; Botvin et al., 2006; Enright & Knutson, 2003; Lee et al., 2008) measured the reduction in problem behaviour only. Measurement of positive behaviours would likely have led to valuable knowledge about whether the intervention programmes were associated with changes in positive behaviour outcomes. The acquisition of positive skills is likely to be important for students to learn lifelong self-management strategies (Gresham & Elliott, 1987).

Observations carried out in environments such as the school classroom have been recommended as a highly valid ecological method for measuring children's social skill abilities (Gresham & Elliott, 1987). Only two studies employed the use of direct observation in the measurement of intervention effects (Carboni et al., 2013; Singh et al., 2013).

Additionally, the reviewed mindfulness studies predominantly employed either teacher or student reports of behaviour thus limiting the reliability of study findings due to common informant biases inherent in these methods of assessment (Elliot, Busse, & Gresham, 1993).

The reliance on teacher reports of student behaviour is a limitation common to mindfulness

intervention studies, an aspect of mindfulness research, also identified by Burke (2010) that requires attention. In addition, small sample size was identified as a limitation in the mindfulness research, another finding also supported by Burke (2010).

Strengths of the Research

Twenty five programmes indicated positive effects for students in areas of social and emotional learning related to improved pro-social skills. An interactive approach to skill instruction was implemented across all 27 programmes with group discussion, clear and simple exercises, and active skill practice commonly used when teaching students. Training teachers to implement programmes is common and appeared effective; this may reduce the cost of implementation while also making programmes more accessible to schools and students (Beets et al., 2009; Botvin et al., 2006; Enright & Knutson, 2003; Greenberg et al., 1995; Joyce et al., 2010; Linares et al., 2005; Neace & Munoz, 2012; O'Neill et al., 2011; Roberts et al., 2007; Schonert-Reichl & Lawlor, 2010).

Ten conflict resolution programmes reported good effects for improved social skills related to managing situations of conflict effectively. The focus of these programmes was largely on the interactions that take place between students and on developing skills to increase positive outcomes for both parties when in conflict. Skills in self-regulation were taught in the context of conflict resolution. Twelve mindfulness based programmes reported good effects for improved self-regulation related to, and also beyond, the setting of conflict resolution. In these programmes students learnt skills with a strong focus on improving their ability to self manage without restriction to any particular setting or situation.

The Current Research Study

Drawing on research summarised above, the present research study involves a combined conflict resolution-mindfulness intervention for primary school children using skills adapted from the PP conflict resolution programme (Allen, 2009) and the AAP mindfulness

programme (Napoli et al., 2005). Three skills were drawn from the PP programme and three skills were drawn from the AAP programme and combined into the one intervention. The PP (Allen, 2009) and the AAP (Napoli et al., 2005) were both selected as the source for the combined programme due to the following reasons. Firstly, the authors reported that children were able to learn the PP and AAP skills and the two studies indicated improvements following intervention; $d = .77 - .84$ (Allen, 2009) and $d = .39 - .60$ (Napoli et al., 2005). Secondly, the skills appeared appropriate for the age and level of development for children selected to participate in the present study. Finally, the skills were clearly described and appeared relevant to the needs of the children who were in the classroom in which the current study was implemented.

The combined conflict resolution-mindfulness intervention was developed with the goals stipulated by the New Zealand MoE in mind (Ministry of Education, 2004). The relevant goals include offering education to all students without barriers, providing an environment where students can reach their full potential and fostering skills and knowledge necessary for success throughout life. A goal of the PP (Allen, 2009) was to increase children's positive skills for relating to others through teaching conflict resolution skills and a goal of the AAP (Napoli et al., 2005) was to have a positive impact on children's lives through teaching mindfulness skills. These goals are seen to closely align with those outlined by the New Zealand MoE (Ministry of Education, 2004).

The aim of the study was to assess whether delivering a classroom-based combined conflict resolution-mindfulness intervention had an effect on the positive and negative peer interactions of children. Behavioural observations were conducted with nine focus children, at various times and in different school settings to detect any general effect of the intervention. Collecting repeated measures of nine children's interactions across study phases offered an effective method for assessing whether there was a detectable change in each child's

interactions during and after intervention relative to baseline levels, whether any changes were large enough to be clinically significant, and if any changes were maintained into follow-up. Teacher ratings of the whole class based on the teacher's experience of children in the class were implemented pre-post intervention as a test of generality across all classroom children. The pre-post teacher report measure included items drawn from the Positive Behaviour Scale (Mainieri, 2006), Strengths and Difficulties Questionnaire (Goodman, 1997) and Behaviour Problems Index (Peterson & Zill, 1986). Because the intervention was necessarily a group intervention, but with repeated measures of the nine focus children, modified Brinley plots (Blampied, 2007; Blampied, 2008) were used to examine changes over time as assessed by the teacher report. Time-series plots of repeated observations of behaviour were also used to examine changes in each of the nine children's behaviour over time (Cooper, Heron, & Heward, 2007).

Social Validity. As Bailey and Burch (2002) wrote, an important aspect of single case research is to ensure that the aim of an intervention aligns with both the needs of the participants and the setting within which they interact. Information from those involved in an intervention, such as teachers, can offer important insight into how useful and relevant an intervention was (Cooper et al., 2007). In the present study the Classroom Teacher Survey was administered post-intervention as a measure of social validity.

Research Question

This pilot study will seek to investigate whether a combined conflict resolution-mindfulness intervention implemented in a primary school classroom of children aged between five and seven years is associated with improvements in measures of positive peer interactions and reductions in measures of negative peer interactions.

Chapter Three

Methods

Ethical Approval

Approval was gained from the University of Canterbury Educational Research Human Ethics Committee (Appendix 1) prior to commencing the study. Consent was sought from all participants before beginning the study. It was made clear that participation by each party was voluntary and that at any point parents, an individual student, the classroom teacher and/or the school were able to withdraw from the study.

Recruitment

Following ethical approval, the manager for Resource Teacher: Learning and Behaviour (RTLB) for the Te Paroa cluster in south and east Christchurch recruited a school to participate. The principal and Board of Trustees of the nominated school were contacted to gain approval to participate in the study. The researcher spoke with all classroom teachers in the school and gave a detailed explanation of the content and goals of the study. Individual teachers were asked to inform the school principal if they wished to have the study based in their classroom. One classroom teacher voiced a keen interest and gave approval to participate in the study. All children from this teacher's classroom gave consent to take part in the study, following approved informed consent procedures.

Setting

The current study took place in one classroom of a primary school based in Christchurch. The school had been affected by recent earthquakes that lead to widespread damage to many buildings and the lives of people throughout the wider city were affected (Brown, 2011). As a result of the earthquakes, both staff and students at the recruited school had experienced significant disruption and times of difficulty prior to the study (Gates, 2013; Shaking Up Christchurch Education, 2011). The school held a decile five rating which gave an indication

that the school community was largely made up of families from a middle income socioeconomic status background ([SES] Caygill & Sok, 2008). The researcher and the classroom teacher were both involved in delivering the intervention.

The researcher held a Bachelor Degree in Psychology and was enrolled in postgraduate psychology studies at the University of Canterbury. The researcher had experience working with children in special education settings. Prior to conducting the study, the researcher participated in a three day intensive mindfulness training course. The classroom teacher co-facilitated two sessions. The teacher was registered with 10 years experience in teaching primary school aged children. The teacher held a Diploma in Teaching and had not participated in any research projects in the past.

Participants

Informed parental consent was obtained for all 22 children in the classroom. There were 11 boys and 11 girls (n= 22). The age of children ranged between five and seven years and the mean age of children was 6.3 years. Sixteen children were of New Zealand European ethnicity, two children were of Maori ethnicity, one child was of Maori/Cook Island ethnicity and the ethnicity of three children was not reported. All children had been in the classroom for seven months and had been taught by the same class teacher during this time.

Focus children. From all children in the classroom (full parental consent was received for all children), the teacher nominated nine children (prior to the teacher completing the Positive Behaviour Scale (PBS), the Strengths and Difficulties Questionnaire (SDQ), and the Behaviour Problems Index (BPI) items, instruments described later in this chapter) who the teacher felt would benefit the most from the intervention; these children are the focus children. There were eight boys and one girl in this group. These nine children ranged in age from 5 years 11 months to 6 years 8 months. One child was of Maori ethnicity, one child of Maori/Cook Island ethnicity, four children identified with New Zealand European ethnicity

and the ethnicity of three children was not reported on the school records. These nine children are described in more detail below:

John. The teacher reported that John was an independent and confident young boy who struggled with sharing, showing kindness and showing consideration for others. The teacher also reported that John had difficulty getting along with teachers and he appeared impulsive in his behaviour. John received a pre-intervention total score of '0' for the PBS and SDQ items and a pre-intervention total score of '8' for the BPI items.²

Tony. According to the teacher, Tony had a healthy sense of curiosity and he showed a willingness to explore new experiences. A further strength of character also reported by the teacher was his tendency to be self reliant. According to the teacher, Tony struggled to share with others, offer others help and he was argumentative at times. Tony received a pre-intervention total score of '0' for the PBS and SDQ items and a pre-intervention total score of '10' for the BPI items.

Ashton. Ashton was described by the teacher as a generally happy and cheerful young boy who would help others if they were upset. The teacher also reported that Ashton experienced difficulty regulating his mood and managing impulsive behaviour at times. Ashton received a pre-intervention total score of '7' for the PBS and SDQ items and a pre-intervention total score of '5' for the BPI items.

Melanie. According to the teacher, Melanie was an independent and self reliant young girl. The teacher also reported that Melanie appeared nervous and anxious at times and she struggled to get along with others. Melanie received a pre-intervention total score of '7' for the PBS and SDQ items and a pre-intervention total score of '8' for the BPI items.

² Three Positive Behaviour Scale items and four SDQ items were completed by the teacher pre-intervention; each item was scored and the item scores were added to reveal a total score. Minimum total score of '0' indicates low positive peer interaction. Maximum total score of '14' indicates high positive peer interaction.

Seven Behaviour Problems Index items were completed by the teacher pre-intervention; each item was scored and the item scores were added to reveal a total score. Minimum total score of '0' indicates low negative peer interaction. Maximum score of '14' indicates high negative peer interaction.

Michael. Michael got along with others his age and, according to his teacher, was well liked by his peers. His teacher also reported his tendency to act impulsively and tell lies and/or keep secrets. Additionally the teacher reported that Michael struggled to wait his turn when playing games with others and did not show a strong sense of helping others when they were hurt. Michael received a pre-intervention total score of '4' for the PBS and SDQ items and a pre-intervention total score of '4' for the BPI items.

William. The teacher reported that William was helpful and he showed patience and kindness towards others. William often appeared anxious, according to the teacher, and at times he struggled to consider the feelings of others. William received a pre-intervention total score of '5' for the PBS and SDQ items and a pre-intervention total score of '4' for the BPI items.

Harry. Harry was described by the teacher as cheerful, happy and well liked by other children his age. The teacher also reported that Harry was impulsive at times and he did not show remorse following acts of misbehaviour. Harry received a pre-intervention total score of '8' for the PBS and SDQ items and a pre-intervention total score of '0' for the BPI items.

Sam. Sam was a cheerful and happy boy who appeared to enjoy seeking out new experiences, according to the teacher, who also reported that he got along with his peers and showed consideration for others' feelings. The teacher also reported that Sam's behaviour was impulsive at times and his mood could quickly change. Sam received a pre-intervention total score of '7' for the PBS and SDQ items and a pre-intervention total score of '1' for the BPI.

Eric. Eric was described by the teacher as kind, considerate and keen to share. Eric did act on impulse and, according to the teacher, he often spent time with children who got into trouble. Eric received a pre-intervention total score of '6' for the PBS and SDQ items and a pre-intervention total score of '4' for the BPI items.

Experimental Design

A single case research design, with phases A (baseline), B (training), C (reminding), D (follow-up) replicated across eight children, was used for this study. While AB designs are acknowledged to be inferentially weak designs (Cooper et al., 2007), it was not feasible to implement either a reversal design (the effects of instruction could not meaningfully be withdrawn) nor could a multiple-baseline design be implemented across participants because all children participated in the same class instruction. In this single case research, child behaviours are repeatedly observed in baseline, intervention, and follow-up phases, and conclusions are drawn regarding possible intervention effects based on the extent to which changes associated with intervention are replicated with other participants (Bailey & Burch, 2002; Blampied, 1999; Blampied, 2001). In this study, the nine focus children represented the first iteration and the eight replications.

Measures

Repeated measures of positive and negative social interactions of focus children were collected by direct observation across all experimental phases. Teacher reports of all classroom children's positive and negative interactive behaviour were collected pre and post intervention. Direct observation has been recommended to be employed in conjunction with teacher reports of behaviour in order to address potential limitations of each measurement method (Landau & Swerdlik, 2005; Nock & Kurtz, 2005).

Positive and Negative Social Interactions. Direct observation using a partial interval recording procedure (Bailey & Burch, 2002) was used to record observed positive social interactions and observed negative social interactions of the nine focus children. Interactions of a focus child could occur with another focus child, other children in the class, other children who visited the classroom and other children in the school grounds. Because peer interactions were the target independent variable, interactions with the teacher were not

recorded. In this recording procedure the observer watches for five seconds and records for five seconds until 60 intervals (10 minutes) are completed. Upon the first occurrence of either a positive or a negative interaction in an interval that interval was scored as positive or negative, consistent with the partial-interval recording protocol. An interaction which began in one interval and continued into the next interval was recorded again in the new interval. For the purpose of data summarisation, the percent of intervals in which a positive interaction occurred and the percent of intervals in which a negative interaction occurred was calculated. No interaction was recorded if a child was independently working on a task or playing alone. An interval where no positive or negative interaction occurred was left blank on the recording sheet. Blank intervals were excluded in the percent calculation.

Positive social interactions. An interaction characterised by care and kindness was recorded as a positive interaction. Examples of positive interactions are shown in Table 3 and are derived from other studies (Balderson & Sharpe, 2005; Singh et al., 2013; Volpe, DiPerna, Hintze, & Shapiro, 2005). A positive social interaction was recorded if one or more of the described interactions occurred during a single interval.

Negative social interactions. An interaction characterised by conflict and disruption was recorded as a negative social interaction. Negative interactive behaviour was based on definitions described in a study by Singh et al. (2013). Examples of negative interactions are given in Table 3. A negative interaction was recorded if one or more of the described interactions occurred during a single interval.

Table 3. *Examples of Positive and Negative Interactions with Peers Recorded During Direct Observation*

Interaction	Example
Positive social interactions, responding positively to a peer or initiating positively to a peer.	Sharing: Sharing toys with another child; Sharing classroom materials such as: pencils, erasers, crayons, and building materials with others; Offering to lend a sun-hat or jersey to another child; Sharing a book during buddy reading; Giving a peer some tool or object needed for a task.
	Positively conversing with another child: Offering ideas for how to solve a problem; Asking a peer how they were feeling, or commenting positively on something the peer was doing or looking at; Making positive comments or statements about something a peer was creating or showing.
	Turn-taking: Offering another child a turn with specific classroom resources such as: books, iPods, iPads, specific coloured pencils/felt pens, hammers, go-karts, and/or watering cans; Allowing for other children to have a turn helping the teacher during group activities; Taking turns during games; Offering for a peer to have the first turn with something when beginning a group activity.
	Supporting or helping a peer: Asking what would be helpful if a peer was upset; Getting practical help for a peer who was upset and/or hurt; Giving a peer a hug if they were crying and/or upset; Assisting a peer to carry something heavy; Offering to help a peer complete an assigned task such as cleaning the classroom, watering the garden and/or tidying the bookcase.

Interaction	Example
Negative social interactions, responding negatively to a peer or initiating a negative interaction to a peer.	Aggression toward a peer: Spontaneously kicking or hitting a peer; Kicking or hitting a peer to communicate a request, for example, for the child to move away or for a child to stop talking; Kicking or hitting a peer in frustration.
	Damaging or destroying the property of a peer: Scribbling on a peers school work; Intentionally ruining a puzzle that another peer, or group of peers, was working on.
	Disrupting a peer/group: Calling-out in class; Interrupting an interaction between two or more peers; Encouraging a peer to engage in non-compliant behaviour.
	Bullying: Calling another peer a derogatory name such as: Stinky, Dumb and/or Stupid; Making negative comments about a peers family members or home life; Yelling or speaking in a raised voice with a peer, for example, saying: “Shut-up”; Threatening to cause a peer physical harm; Threatening to break something of another child’s; Threatening to do something harmful or destructive.

Behaviour Problem Index ([BPI] Peterson & Zill, 1986). As a measure, the BPI was chosen because it includes behaviours related to negative social interaction. Other reasons include its ease of use, free availability and its acceptability in New Zealand. Achenbach and Edelbrock (1981) developed The Child Behaviour Checklist (CBCL) and later, the BPI. The BPI measures both the rate and severity of behaviour problems in children (Peterson & Zill, 1986). The BPI was administered in two large international longitudinal studies investigating levels of problem behaviour in children as rated by mothers and teachers (Mainieri, 2006; McCulloch, Wiggins, Joshi, & Sachdev, 2000). Hofferth & Sandberg (2001) used the BPI in their study and reported reliability measures (Cronbach’s alpha) of 0.90 for the 30 item scale.

The seven items related to negative social interaction that were selected from the BPI (Peterson & Zill, 1986) were: (1) Has trouble getting along with other people his/her age; (2) Is not liked by other people his/her age; (3) Has a very strong temper and loses it easily; (4) Breaks things on purpose or deliberately destroys his/her own or another's things; (5) Bullies or is cruel or mean to others; (6) Argues too much; (7) Cheats or tells lies. Response options for each item were '[1] not true', '[2] sometimes true' and '[3] often true'. A response of [1] was given a score of '0', a response of [2] was given a score of '1' and a response of [3] was given a score of '2'. By adding each item score, a total score was calculated. The possible range for total scores was from 0-14. A total score of '0' indicated low levels of negative interactive behaviour and a score of '14' indicated high levels of negative interactive behaviour. The BPI items were completed by the teacher for all children in the class once during the first week of baseline (pre-intervention) and once at the completion of the reminding phase (post intervention).

Positive Behaviours Scale ([PBS] Mainieri, 2006). The PBS was chosen for use in this study because it has items related to the positive interactions of children. The PBS is a standardised scale that has been used in a large international longitudinal study by Mainieri (2006) and gives a total score of a child's positive behaviour. Mainieri (2006) adapted an original 25 item PBS to create a modified 10 item scale. The mean total score for the 10 item scale was reported at 4.1. Reliability measures indicated a Cronbach's alpha of 0.82 and a factor analysis conducted by the authors suggested that the scale had good internal validity.

Three items related to positive child interaction were selected from the 10 item PBS (Mainieri, 2006) for inclusion in the teacher report. The three items were: (1) Gets along well with other children his/her age; (2) Is admired and well-liked by other children his/her age; (3) Waits his/her turn in games and other activities. Questions were answered on a five-point Likert scale and response options for each question ranged from 1-5. A response of [1] meant

‘not like this child’ a response of [2], [3], or [4] meant ‘somewhere in between’ and a score of [5] meant ‘totally like this child’. In scoring each item, responses [1, 2] were given a score of ‘0’, responses [3, 4] were given a score of ‘1’ and a response of [5] was given a score of ‘2’.

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). As a measure, the SDQ was selected to give an indication of pro-social behaviour. The SDQ is freely available on the internet and is widely administered both in New Zealand and internationally. The SDQ has been used in previous studies as a successful measure of student behaviour in the school context (Goodman, 1997; Joyce et al., 2010). The SDQ was developed by Goodman (1997) in order to provide a simple and easy to use scale for teacher, parent, and self reports of children’s strengths and difficulties. The SDQ for four to ten year old children consists of 25 statements that target areas of “behaviour, emotions and relationships” (Goodman, 1997, p. 581). The 25 items load onto five scales: Emotional Symptoms, Conduct Problems, Hyperactivity, Peer Problems and Pro-social Behaviour. Behaviour is measured according to whether it is ‘not true’, ‘somewhat true’ or ‘certainly true’ of the target child (Goodman, 1997).

Four items from the SDQ Pro-Social scale (Goodman, 1997) aligned with positive social interactions defined in the current study and were included in the teacher report. The four items were; (1) Shares readily with other children; (2) Is considerate of how other people feel; (3) Is helpful if someone is hurt, upset or feeling ill; (4) Is kind to younger children. The response options for each item were ‘[1] not true’, ‘[2] somewhat true’ and ‘[3] certainly true’. For scoring purposes, a response of [1] was given a score of ‘0’, a response of [2] was given a score of ‘1’ and a response of [3] was given a score of ‘2’.

The four items from the PBS and the four SDQ items were scored and added together to give a total score for positive interactive behaviour. Possible total scores ranged from 0-14. A score of ‘0’ indicated low levels of positive interactive behaviour and a score of ‘14’

indicated high levels of positive interactive behaviour. The PBS and SDQ items were completed by the teacher for all children in the class once during the first week of baseline (pre-intervention) and once at the completion of the reminding phase (post intervention).

Classroom Teacher Survey. A teacher survey consisting of 10 items was developed based on questionnaires administered in previous studies (Klatt et al., 2013; Schonert-Reichl & Lawlor, 2010). The survey was used as a measure of social validity in order to gather information about how appropriate the intervention was and about the usefulness of the intervention skills. Six items (1-6) were: (1) The intervention programme aligns well with the relevant year level curriculum goals for my class; (2) I would use this intervention programme with my class again; (3) I would suggest this intervention programme to another teacher; (4) The intervention programme was relevant to children in my class; (5) I believe the intervention programme had a positive effect; (6) The intervention programme was straightforward and uncomplicated to implement. Four items (items 7-10) asked the teacher to rate how useful they believed each of the following intervention skills were: (7) Listen and Talk; (8) Stop, Sit and Think; (9) Breathe and Notice and (10) Breathe and Notice Changes. Items 1-6 were rated on a five-point Likert scale and response options given were '[1] Strongly Disagree', '[2] Disagree', '[3] Neutral', '[4] Agree' and '[5] Strongly Agree'. Each item was scored accordingly; [1] was given a score of '1', [2] was given a score of '2', [3] was given a score of '3', [4] was given a score of '4' and [5] was given a score of '5'. Items 7-10 were rated on a five-point Likert scale and response options ranged from '[1] Not useful', '[2] Somewhat useful', '[3] Average', '[4] Useful', to '[5] Very useful'. Responses were scored accordingly: a response of [1] was given a score of '1', [2] a score of '2', [3] a score of '3', [4] a score of '4' and a [5] a score of '5'. The addition of all item scores would reveal a total score. A score of 10 indicated low social validity and a score of 50 indicated

high social validity. The teacher was administered the Classroom Teacher Survey at the completion of the follow-up phase.

Intervention

The intervention was a combined conflict resolution-mindfulness intervention. Three skills were taken from a conflict resolution programme and three skills were taken from a mindfulness programme to create the combined programme. The conflict resolution skills (Table 4) were based on three described in a study by Allen (2009). The mindfulness strategies (Table 4) were selected from a study by Napoli et al. (2005). The inclusion of each skill in the programme was guided by the developmental appropriateness for children aged five to eight years. Another important factor considered was whether the skill aligned with the broader aim of the intervention: for all participating children to develop improved conflict resolution and self-management skills that lead to improved peer interactions. Finally, the teaching of each skill within a short time frame needed to be possible and therefore the complexity of each skill was considered.

Table 4. *A Description of the Six Intervention Skills*

Skill	Aim	Description
Listen and Talk (Conflict Resolution)	For children to learn and develop healthy communication skills that foster positive peer interaction and effective conflict resolution.	Children learn to talk about feelings and problems as an alternative to unhealthy, ineffective methods of communication. How to listen to another person when they are talking and how to hear what another person is saying before speaking. An emphasis is placed on children learning about being kind and caring toward others (Allen, 2009).

Skill	Aim	Description
Walk Away (Conflict Resolution)	For children to learn decision making that is supportive of positive peer interaction and for children to develop respect for others so that negative interaction is less likely to take place during situations of conflict.	<p>This skill focuses on children learning about the value of recognising uniqueness in every person.</p> <p>The concept that people have different opinions and ideas that make them special as an individual is emphasised.</p> <p>Children learn how to walk away from a potential conflict in order to avoid escalation of a situation.</p> <p>Children also learn to make independent decisions about when best to walk away from situations of conflict (Allen, 2009).</p>
Stop, Sit, and Think (Conflict Resolution)	<p>For children to learn improved self- control and conflict resolution abilities.</p> <p>For children to develop the ability to regard personal feelings and those of others when in conflict, leading to positive peer interaction.</p>	<p>The focus of this skill is on children learning to implement a step-by-step self-control strategy as an alternative to acting on impulse.</p> <p>Three simple steps: (1) Stop (2) Sit and (3) Think are taught for managing oneself when in conflict with another person. Stop involves a child stopping everything they are doing or thinking. Sit involves sitting down quietly, and Think involves reflecting what feelings are present, how another person might be feeling and how best to act next (Allen, 2009).</p>

Skill	Aim	Description
<p>Three Part Breath (Mindfulness)</p>	<p>For children to learn to have an awareness of their body through focusing the mind on the physical act of breathing; The first stage in breathing meditation.</p> <p>For children to reach an increased level of awareness that helps them to experience a clear and calm mind-state from which to view, process, and act upon incoming information and experiences.</p> <p>Children will use this skill to calm themselves down when in situations of conflict, or when feeling upset, and as a result engage in less negative interaction.</p>	<p>Children learn to be aware of the breath and the breathing process in the body.</p> <p>Children learn three steps that assist in focusing one's attention on the breath as it moves through the body: (1) breathe in, (2) fill tummy with air while noticing the air travel through parts of the body such as the nose, chest and ribcage, (3) exhale slowly while noticing the body sensations connected with the exhale of the breath (Napoli et al., 2005).</p>
<p>Focusing Attention (Mindfulness)</p>	<p>For children to learn to manage stress and pressure by being present in the moment. Children learn a strategy to use when feeling stressed (due to influences in the environment and/or interactions with others) in support of relaxation and a healthy mind/body balance from which positive interaction can occur.</p>	<p>The goal of this skill is for children to develop the ability to focus one's attention on an experience without making judgement on any aspect of the experience (Napoli et al., 2005).</p>
<p>Noticing Feelings (Mindfulness)</p>	<p>For children to develop the ability to tune into their feelings leading to increased self-awareness and improved focusing abilities.</p> <p>Children will implement this strategy when in interaction with</p>	<p>Feelings and their transient nature are the focus of this skill.</p> <p>Children learn that feelings change in reaction to the experiences one encounters.</p> <p>Children practice noticing changes</p>

Skill	Aim	Description
	others to assist with making clear and calm decisions based on an awareness of how they are feeling at the time.	in feelings and the body as they occur in the moment (Napoli et al., 2005).

Procedure

Prior to beginning the baseline phase, the researcher and teacher met to discuss the overall study goals and intervention timeline. Each intervention skill was reviewed to ensure that the content of sessions was relevant to the children in the classroom. The teacher was offered the opportunity to give input into the overall structure of the intervention and specific session content.

Phase 1: Baseline. The typical classroom schedule and curriculum continued unchanged. Normal classroom procedures included behaviour management strategies that were implemented by the classroom teacher when unacceptable student behaviour occurred. The steps and consequences that followed unacceptable behaviour were clearly outlined on a poster on the classroom wall and were known to all classroom children. Direct observations of the focus children were initiated for two weeks. Observations were scheduled to take place twice a day, five days a week. Children were observed in various areas of the school including the classroom, school gym, assembly hall and the school library. Each focus child was observed for 10 minutes at a time. There was no particular order in which children were observed. The teacher completed the positive peer interaction PBS and SDQ items and the negative interaction BPI items for each classroom child during the first week of baseline. No training or intervention was delivered during this time.

Phase 2: Combined Conflict Resolution and Mindfulness Intervention (CR+M). The intervention phase took place across six school weeks. Three intervention sessions were delivered per week with each session lasting between 10-15 minutes. All children in the

classroom had the opportunity to take part in the programme sessions. If, on any day, a child did not wish to participate then they could choose to do an alternative activity which was available for any non-participating children. The sessions were organised into teaching units (Table 5). Each unit consisted of three sessions which focused on the same skill. The teaching of each new unit began on a Tuesday. The second session for that skill was delivered on a Wednesday and the third session on the Thursday of that same school week. No intervention sessions were delivered on Monday or Friday. Intervention sessions were delivered in the afternoon of each Tuesday, Wednesday and Thursday immediately following the school lunchtime period. Each training session took place in the same part of the classroom to keep the session set-up consistent. The teacher was requested to continue with the typical classroom schedule and curriculum throughout the intervention phase aside from during the time when the intervention sessions were being delivered. Direct observations continued to take place twice a day five days a week; the same observation schedule as in baseline phase was followed.

Table 5. *Conflict Resolution and Mindfulness Intervention Programme Components*

Skill	Session and Content
Listen and Talk	<i>Session 1a.</i> Introduction to the intervention and outline of session times/duration. Introduction of skill 'Listen and Talk'.
<u>Week One</u> (Unit 1)	Guess the feeling game. Facilitator led role Play with Puppets: how to 'Listen and Talk'.
	<i>Session 1b.</i> Guess the feeling game. Review of previous session. Group discussion: how to incorporate 'Listen and Talk' skills into situations when an individual is feeling grumpy, sad, angry or

Skill	Session and Content
	<p>worried.</p> <p>Class led role play with facilitator using puppets to practice ‘Listen and Talk skills’.</p> <p>Reflection on role play and identification of kind, friendly, helpful and considerate strategies.</p> <p><i>Session 1c.</i></p> <p>Guess the feeling game.</p> <p>Group discussion: review of six concepts; how to listen, how to talk about feelings, how to be kind, how to be friendly, how to be helpful and how to show consideration. Also, how to implement ‘Listen and Talk’ skills in daily life.</p> <p>Class led role play with students using puppets to practice ‘Listen and Talk’ skills.</p> <p>Review of Unit One.</p>
<p>Walk Away</p> <p><u>Week Two</u></p> <p>(Unit 2)</p>	<p><i>Session 2a.</i></p> <p>Introduction of concepts: uniqueness and differences.</p> <p>Group discussion: how to recognise unique qualities in others.</p> <p>Introduction of ‘Walk Away’ skill.</p> <p>Facilitator led role play using puppets: identification of uniqueness and differences in others using the ‘Walk Away’ skill when in conflict.</p> <p><i>Session 2b.</i></p> <p>Facilitator led role play with puppets: identification of uniqueness and differences and how to walk away from conflict.</p> <p>Small group activity: student led role plays; identification of uniqueness and differences in others and how to walk away.</p> <p><i>Session 2c.</i></p> <p>Facilitator led role play with puppets: identification of uniqueness and differences in others and how to walk away.</p>

Skill	Session and Content
	<p>Group discussion: how to recognise another's individuality and acknowledge differences in others using the 'Walk Away' skill.</p> <p>Review of Unit Two.</p>
<p>Stop, Sit, Think</p> <p><u>Week Three</u> (Unit 3)</p>	<p><i>Session 3a.</i></p> <p>Introduction of 'Stop, Sit, Think' skill.</p> <p>Facilitator led role play: 'Stop, Sit, and Think'.</p> <p>Group skill practice and group discussion: identify and talk through components of each step for 'Stop, Sit and Think' skill.</p> <p><i>Session 3b.</i></p> <p>Class led role play using puppets: 'Stop, Sit, and Think'.</p> <p>Small group activity: group role play; 'Stop, Sit, and Think'.</p> <p><i>Session 3c.</i></p> <p>Class led role play using puppets: 'Stop, Sit, and Think'.</p> <p>Group skill practice: practice steps for 'Stop, Sit, Think' together as a group.</p> <p>Group discussion: identify the three steps of 'Stop, Sit, Think' and how to use 'Stop, Sit, Think' in daily life.</p> <p>Review of Unit Three.</p>
<p>Three-Step Breathing</p> <p><u>Week Four</u> (Unit 4)</p>	<p><i>Session 4a.</i></p> <p>Introduction to three step 'Breathing' skill and what it means to be mindful and present in the moment.</p> <p>Explanation of the breathing process with facilitator led role play of skill.</p> <p>Group skill practice: three step breathing exercise.</p> <p><i>Session 4b.</i></p> <p>Group skill practice: three step breathing practice.</p> <p>Group skill practice: three step breathing practice with additional exercise of breath counting.</p>

Skill	Session and Content
	<p><i>Session 4c.</i></p> <p>Group skill practice: three step breathing practice.</p> <p>Group discussion: breathing as a helpful tool to manage when feeling upset and/or distressed.</p> <p>Review of Unit Four.</p>
<p>Focusing Attention</p> <p><u>Week Five</u> (Unit 5)</p>	<p><i>Session 5a.</i></p> <p>Introduction to ‘Focusing Attention’ skill.</p> <p>Group discussion: the non-judgemental experience.</p> <p>Facilitator led role play: focusing attention on surrounding sounds void of judgement.</p> <p><i>Session 5b.</i></p> <p>Group skill practice: notice surrounding sounds without placing judgement on any aspect of the experience.</p> <p>Group discussion: the influence of judgement on experiences.</p> <p>Group skill practice: notice surrounding smells of different flowers without placing judgement any aspect of the experience.</p> <p><i>Session 5c.</i></p> <p>Group skill practice: notice surrounding sounds without placing judgement on any aspect of the experience.</p> <p>Group discussion: benefits of noticing an experience void of judgement and how to use ‘Focusing Attention’ skill in daily life.</p> <p>Review of Unit Five: ‘Focusing Attention’ as a tool when feeling upset and/or distressed.</p>
<p>Noticing Feelings</p> <p><u>Week Six</u> (Unit 6)</p>	<p><i>Session 6a.</i></p> <p>Introduction to ‘Noticing Feelings’ skill.</p> <p>Group discussion: identification of different feelings and influences on feelings.</p> <p>Facilitator led role play using puppets: noticing changes in feelings in response to eating different foods.</p> <p>Group skill practice: noticing changes in feelings in response to</p>

Skill	Session and Content
	<p>hearing different pieces of music. Group discussion: noticing changes in feelings.</p> <p><i>Session 6b.</i> Group skill practice: noticing changes in feelings in response to hearing different pieces of music. Group discussion: noticing changes in the mind and body.</p> <p><i>Session 6c.</i> Group skill practice: noticing changes in feelings in response to hearing different pieces of music. Group discussion: noticing changes in mind and body in daily life. Review of Unit Six: influences on changes in mind and body following an experience. Intervention Review: review of all six intervention skills. Closing exercise: where to from here? How to use all six skills in daily life.</p>

Phase 3: Reminding. The reminding phase took place over two school weeks. Posters (Figure 1) were placed in the classroom as visual prompts on the first day of the reminding phase. The posters were to assist the children in implementing the intervention skills.

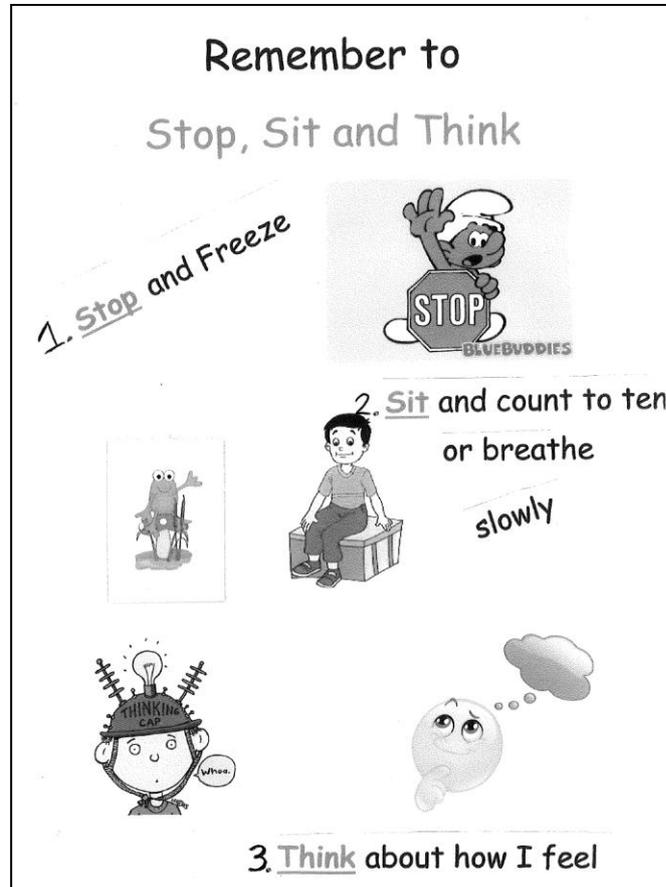


Figure 1. Example of a Reminder Poster.

A poster was developed for each skill. Each poster included a picture showing the specified skill alongside a brief sentence explaining how to implement the strategy related to the skill. Some general word prompts were also written on each poster. In addition, the teacher was asked to verbally prompt all children to practice the intervention skills at various times throughout each day. Observations of the focus children continued twice a day five days a week; the same observation schedule as in baseline was followed. The teacher delivered the typical curriculum and followed the normal classroom schedule.

Phase 4: Follow-up. The follow-up phase started on a Monday, three school weeks after the reminding phase had ended. The follow-up phase ran for one week. Observations took place twice a day five days a week; the same observation schedule as in baseline phase was followed. There were no posters in the classroom during the follow-up phase. The typical classroom schedule and curriculum continued unchanged. The teacher completed the positive peer interaction PBS and SDQ items and the negative interaction BPI items for each classroom child at the completion of the follow-up phase.

Data Summarisation and Analysis

Repeated measures. The data from direct observations were graphed and visual analysis was used. Visual analysis is a long standing tool used in the evaluation of graphed data and is seen as fundamental to single case research (Parsonson & Baer, 1992). Visual analysis also allows for the clinical or practical significance of intervention effects to be measured, preventing small effects from being over emphasised (Bailey & Burch, 2002).

Pre-post measure. A total score for each child in the class was calculated for the positive peer interaction items (PBS and SDQ) and the negative peer interaction items (PBI). This was carried out for both the pre-intervention measure and the post-intervention measure; a percentage score was then calculated for each child. Using the raw total scores for each child, a mean and standard deviation was calculated to reveal a group pre-intervention and post-intervention mean and standard deviation. The mean and standard deviation were used to calculate a Cohen's *d* ES (Cumming, 2012) for positive and negative peer interaction (see Appendix 2 for calculation formula).

Chapter Four

Results

The absence of focus children slightly reduced the number of days observed, and changes were made to the number of skills taught.

Absences

During baseline, Melanie was absent for ten observations, Eric for six, Sam for four, William, Tony, John, Ashton and Harry for two and Michael for one. Of the non-focus children, Kim was absent for ten days during the intervention period. The first day of baseline was used as a trial for the researcher to practice the observation protocol and therefore the data collected was not included for analysis.

During the Conflict Resolution and Mindfulness Intervention (CR+M) phase, Eric was absent for two ‘stop, sit, think’ sessions, one ‘breathe’ session, two ‘notice’ sessions and ten observation sessions. John was absent for one ‘listen and talk’ session and three observation sessions. Ashton was absent for one ‘notice’ session and four observations. Michael was absent for one ‘stop, sit, think’ session and three observations. Harry was absent for ten observations, Sam was absent for nine observations, Melanie was absent for two observations and William and Tony were both absent for one observation. Of the non-focus children, Kim was absent for all three ‘listen and talk’ skill sessions and all three ‘stop, sit, think’ sessions as well as twenty observations. Robert, Sarah and Tina were each absent for one ‘stop, sit, think’ session and six observations. Gina was absent for one ‘breathe’ session and two observations. On day ten and day twenty-two the teacher was absent and a relief teacher taught the class for the whole day. On day twenty-one the teacher was absent for the morning and a relief teacher taught the class. Ten observation sessions did not occur due to school activities or other events (e.g. a school book fair and a class outing to a gymnastics hall). During the reminding phase, John was absent for the ‘notice’ review session and one observation. Eric was absent

for eight observations, Melanie and Ashton were each absent for one observation and Sam and Harry were each absent for six observations. Twenty observations were conducted on William, Tony and Michael. Of the non-focus children, Gina was absent for the 'notice' review session and two observations. Emma was absent for all four review sessions and twenty observations. The teacher was absent and a relief teacher taught on day thirty.

The three week break occurred at the end of the reminding phase as planned and the follow-up phase was conducted as planned. Eric, Sam and Harry were each absent for three observations. Ten observations were conducted on the other six focus children. No non-focus children were absent during the follow-up phase. The teacher survey was not completed due to practical reasons that made this impossible.

Changes to Skills Taught

Following teacher consultation the number of intervention skills was reduced to four to align with the time available to teach the CR+M programme and so that the teaching could be completed before the third school term ended. The 'walk away' skill was excluded because it appeared that following discussion with the teacher this skill was least relevant to the needs of the children in the classroom. The 'focusing attention' skill was incorporated into the 'notice' skill sessions. Therefore, the four intervention skills that were taught were: 'listen and talk', 'stop, sit, think', 'breathe' and 'notice'. The content of the intervention sessions was slightly modified (Appendix 3). As planned, teaching sessions were three days a week. Sessions one and two, of unit one ('listen and talk'), were co-facilitated by the teacher while the remaining intervention sessions were taught by the researcher alone. All children who were present participated in each session; no child requested to take part in the available alternative activity. A two week school holiday followed the CR+M phase.

Following teacher consultation, it was decided to review the four skills following the school holiday. These sessions were 10-15 minutes long and occurred on Monday, Tuesday,

Wednesday and Thursday of the first week post holidays, with each of the four skills presented separately in a single session. Details are presented in Appendix 4. No other changes took place.

Effects of the Conflict Resolution-Mindfulness Intervention on the Positive and Negative Interaction with Peers for Nine focus Children

Individual graphs were created for the nine focus children showing the percent of intervals out of 60 with positive and negative social interaction with peers for a total of 77 observations. The total intervals included intervals in which there were no positive or negative interactions. The intervals with no interactions occurred because there were periods of time when the teacher did not want the children to be interacting and although negative interactions could have occurred, positive interactions were less likely. The data were very variable due to a combination of including intervals where no interactions took place and two observations per day (Appendix 5-6). Thus, this variability did not produce graphs on which visual analysis could be reliably conducted (Bailey & Burch, 2002). Therefore new graphs were created for the nine focus children. For the new graphs, the total number of intervals with positive and negative social interaction with peers was identified. All intervals without interactions were removed and the percent of interactions that were positive out of the total of positive and negative interactions was calculated. The data from the two observations per day were combined into percent positive interactions per observation day. These graphs were then subjected to visual analysis as planned and are shown in figures 2-4.

The baseline trend for Eric and William was downward and the baseline trend for Michael was flat and variable (Figure 2). During the CR+M phase, the data was highly variable for all three children but the trends suggested a downward slope for Eric and William. For Michael the trend suggested a slight upward slope. The reminding phase showed

highly variable data, as did the follow-up. Eric and Michael showed an improvement over the first four days after the school holidays, William did not. Overall there was no indication of an intervention effect. On days 31 and 37, Eric was observed talking out of turn and calling out multiple times during mat time. On day 22, Michael was observed pushing a peer on multiple occasions during gymnastics class and on day 24 he was observed talking out of turn multiple times during reading time. On day 29, William was observed talking out of turn multiple times during reading time. On the teacher report, all three children showed improvement on the positive peer interaction items from the PBS and SDQ and reductions on the negative peer interactions items from the BPI (Table 6).

The baseline trend for John was downward and the baseline trend for Tony and Harry was flat and variable (Figure 3). The CR+M data for all three children was highly variable but the trend for John and Tony suggested an upward slope and Harry a downward slope. The reminding phase showed highly variable data, as did the follow-up. Overall, there was no indication of an intervention effect. On day 16, John was observed talking out of turn and calling out multiple times during a spelling test. On days 13 and 22, Tony was observed talking out of turn and calling out multiple times during reading time and writing time respectively. On days 33 and 35, Harry was observed talking out of turn multiple times during mat time and singing respectively. On the teacher report all three children showed improvement on the positive peer interaction items from the PBS and the SDQ and John and Tony showed reductions on the negative interaction items from the BPI (Table 6). Harry's score remained unchanged on the negative peer interaction items from the BPI.

The baseline data suggested a downward slope in trend for Sam, Melanie and Ashton (Figure 4). The CR+M trend for Sam and Ashton was downward and the CR+M trend for Melanie was flat but variable. The reminding phase showed high variability, as did the follow-up. Melanie and Ashton showed an improvement over the first four days following the

holidays but this was not maintained. Overall, there was no indication of an intervention effect. On day 15, Sam was observed talking out of turn and pushing a peer multiple times during school assembly and on days 25 and 26 he was observed talking out of turn multiple times during reading and recorder practice respectively. On day 37 Sam was observed throwing his book twice at a peer during independent reading time. On day 18, Ashton was observed pushing his peer multiple times during gymnastics class and on day 25 he was observed talking out of turn multiple times during reading time. On the teacher report Sam and Melanie's scores on the positive peer interaction items from the PBS and the SDQ remained unchanged and Ashton showed a reduction. On the negative peer interaction items from the BPI on the teacher report Melanie showed a reduction and Sam and Ashton showed an increase (Table 6).

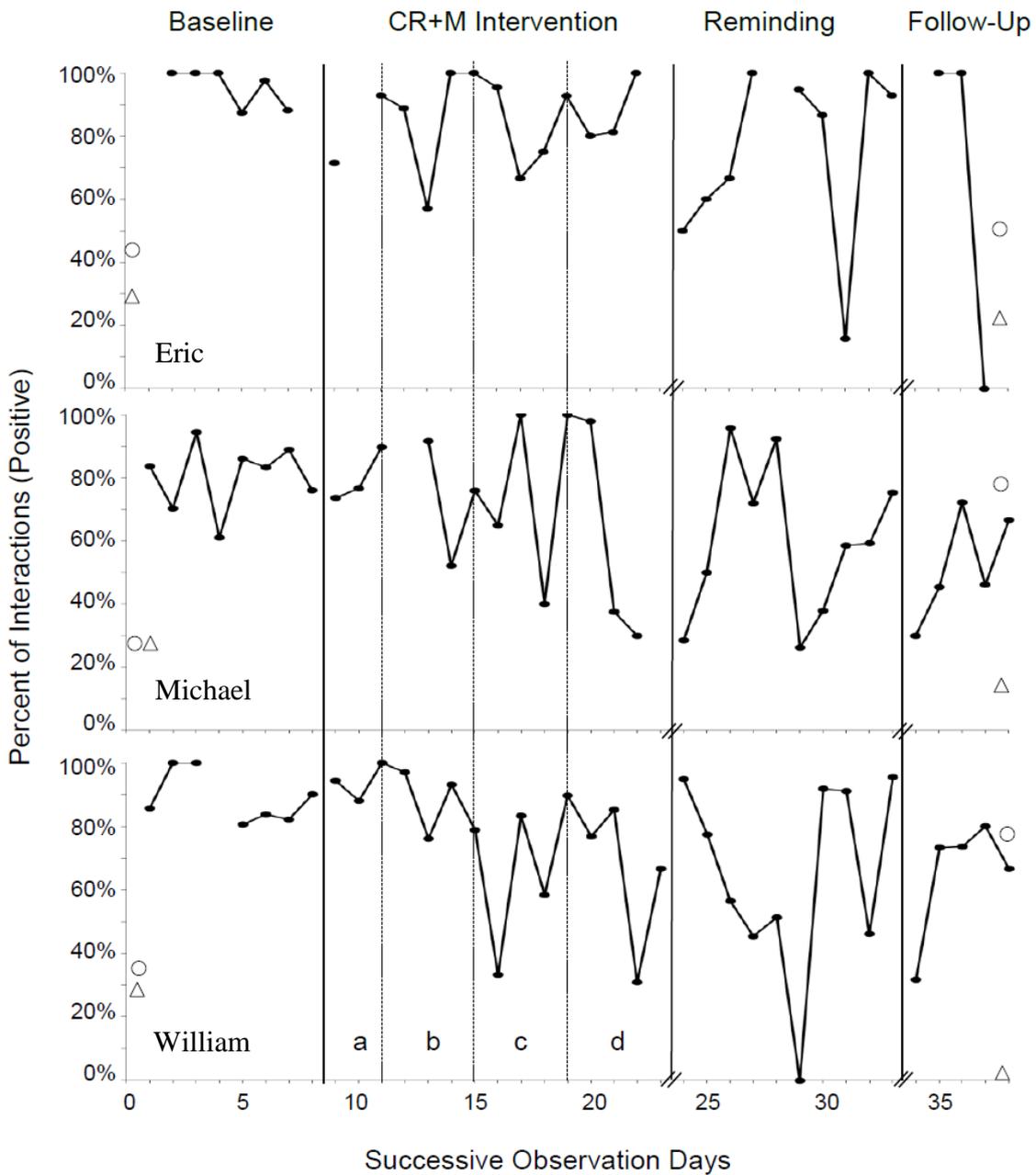


Figure 2. Percent of Interactions that were Positive during Experimental Phases. Dotted lines within the CR+M phase denote sequential introduction a.) listen and talk b.) stop, sit and think c.) breathe d.) notice. A two week school holiday occurred between the 23rd and 24th study days. Three weeks separated the 33rd and 34th study days; no observations occurred on any day during both of these breaks. The -○- indicates the pre and post PBS and SDQ item total scores. The -△- indicates the pre and post PBI item total scores.

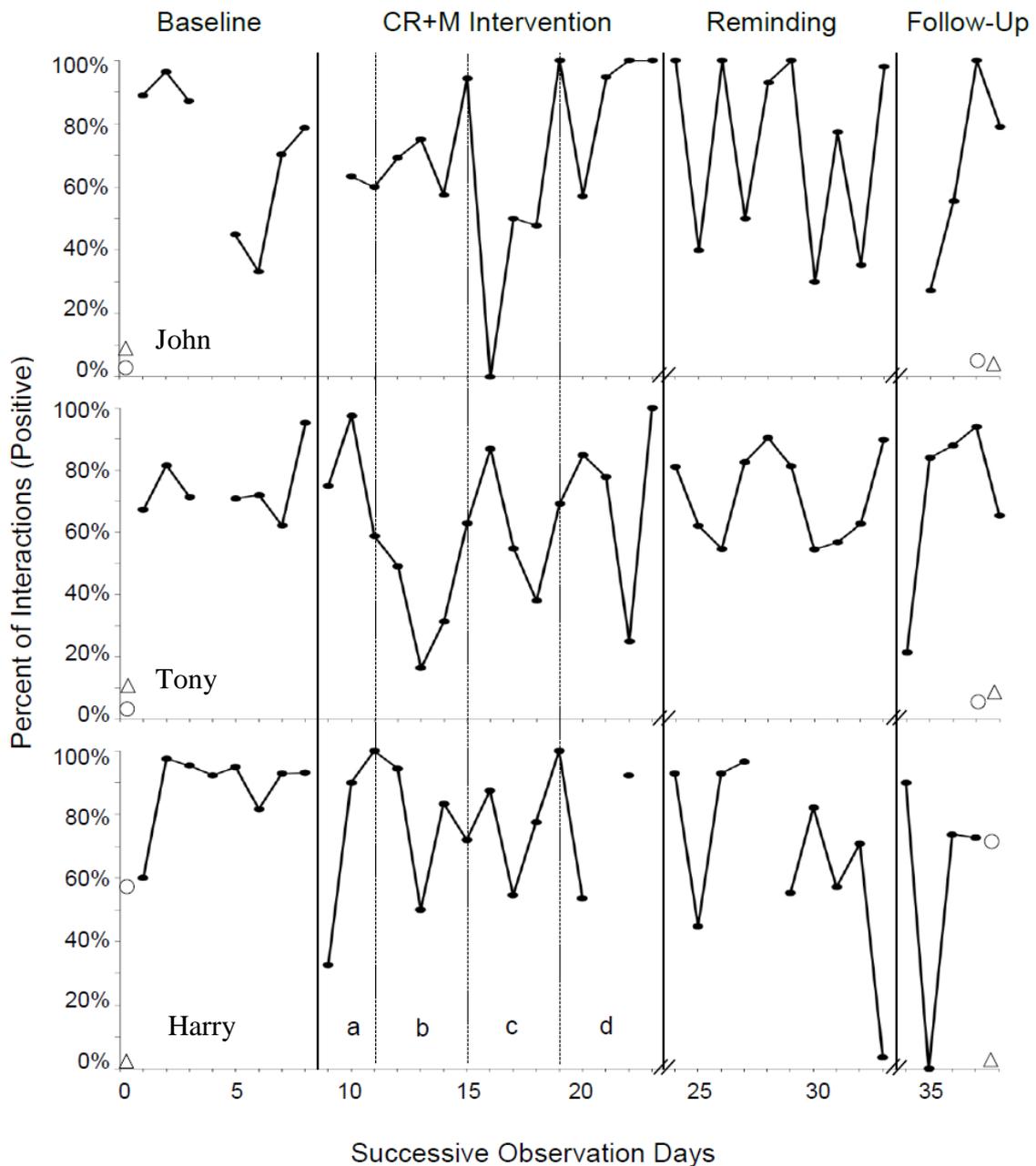


Figure 3. Percent of Interactions that were Positive during Experimental Phases. Dotted lines within the CR+M phase denote sequential introduction a.) listen and talk b.) stop, sit and think c.) breathe d.) notice. A two week school holiday occurred between the 23rd and 24th study days. Three weeks separated the 33rd and 34th study days; no observations occurred on any day during both of these breaks. The -○- indicates the pre and post PBS and SDQ item total scores. The -△- indicates the pre and post PBI item total scores.

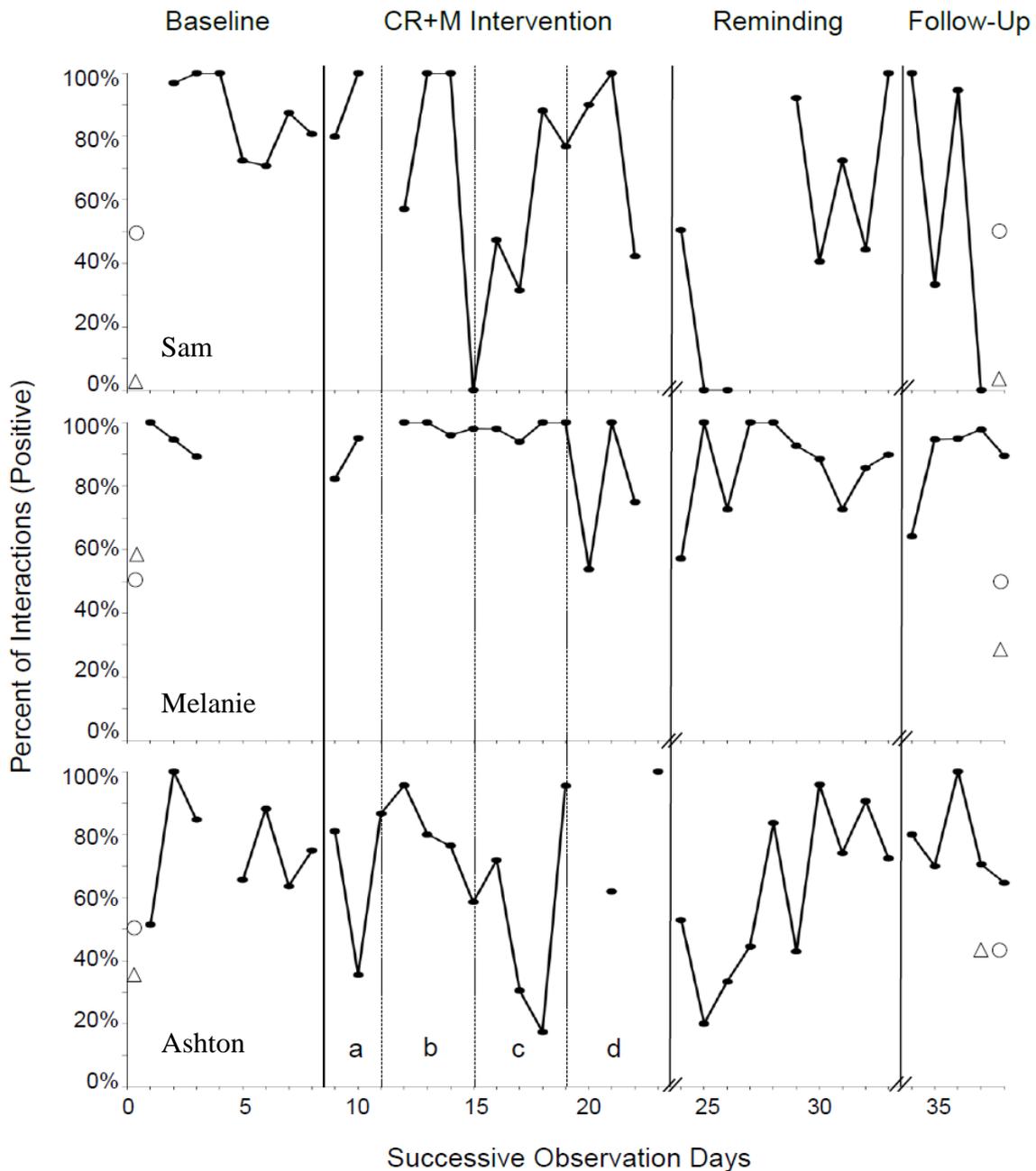


Figure 4. Percent of Interactions that were Positive during Experimental Phases. Dotted lines within the CR+M phase denote sequential introduction a.) listen and talk b.) stop, sit and think c.) breathe d.) notice. A two week school holiday occurred between the 23rd and 24th study days. Three weeks separated the 33rd and 34th study days; no observations occurred on any day during both of these breaks. The -○- indicates the pre and post PBS and SDQ item total scores. The -△- indicates the pre and post PBI item total scores.

Effects of the Conflict Resolution and Mindfulness Intervention for the Whole Class

The mean score for positive peer interaction (PBS and SDQ items) on the teacher report was 8.8 (SD= 4.4) pre-intervention and 10.7 (SD= 3.1) post-intervention (Table 6). Fifty-four percent of children showed improvement, 23% obtained the highest possible score at both pre-intervention and post-intervention, 14% retained the same score and 9% showed a reduction.

The mean score for negative peer interaction (BPI items) on the teacher report was 2.3 (SD= 3) pre-intervention and 1.2 (SD= 2) post-intervention. Forty-one percent of children showed reductions, 50% retained the same score and 9% showed an increase (Table 6).

Effect size calculations (Cohen's d) indicated $d = .50$ for positive peer interactions and $d = .44$ for negative peer interactions.

The two modified Brinley plots (Figure 5) show the total scores for positive interaction and negative interaction as assessed by the teacher. The scores for focus and non-focus children are plotted according to gender. Overall, the girls in the classroom scored higher than the boys on the PBS and SDQ items at both pre and post-intervention intervals. Overall, on the BPI items at pre and post-intervention intervals, the boys in the classroom scored higher than the girls.

Table 6. *Pre-Intervention and Post-Intervention Teacher Report Raw Scores (%) for each Participating Child*

Child	Positive Behaviour Scale Items		Behaviour Problem Index Items	
	Pre Score (%)	Post Score (%)	Pre Score (%)	Post Score (%)
Eric	6 (43)	7 (50)	4 (28)	3 (21)
Michael	4 (28)	11(78)	4 (28)	2 (14)
William	5 (35)	11 (78)	4 (28)	0 (0)
John	0 (0)	6 (43)	8 (57)	2 (14)
Tony	0 (0)	4 (28)	10 (71)	7 (50)
Harry	8 (57)	10 (71)	0 (0)	0 (0)
Sam	7 (50)	7 (50)	1 (7)	2 (14)
Melanie	7 (50)	7 (50)	8 (57)	4 (28)
Ashton	7 (50)	6 (43)	5 (35)	6 (43)
Sarah	9 (64)	12 (85)	0 (0)	0 (0)
Kim	6 (43)	12 (85)	3 (21)	1 (7)
Gina	9 (64)	12 (85)	2 (14)	0 (0)
Louise	7 (50)	11 (78)	2 (14)	0 (0)
Anna	11 (78)	13 (93)	0 (0)	0 (0)
Lisa	12 (85)	11 (78)	0 (0)	0 (0)
Joseph	13 (93)	13 (93)	0 (0)	0 (0)
Sophie	13 (93)	14 (100)	0 (0)	0 (0)
Natalie	14 (100)	14 (100)	0 (0)	0 (0)
Tina	14 (100)	14 (100)	0 (0)	0 (0)
Emma	14 (100)	14 (100)	0 (0)	0 (0)
Robert	14 (100)	14 (100)	0 (0)	0 (0)
Max	14 (100)	14 (100)	0 (0)	0 (0)

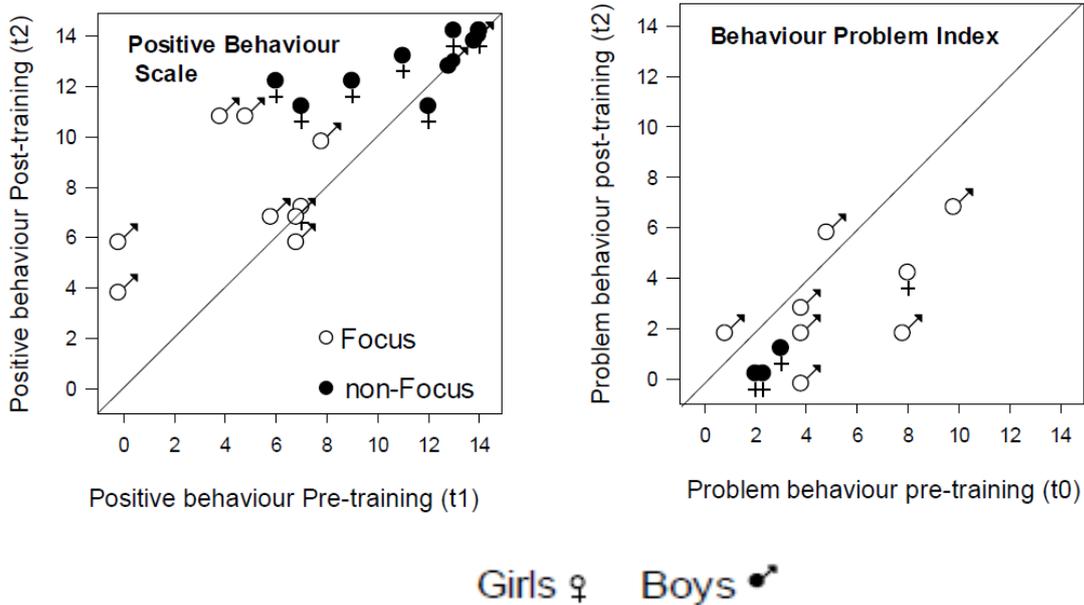


Figure 5. Positive Behaviour Scale Item Scores and Behaviour Problem Index Item Scores Differentiated by Gender and by Focus or Non-Focus Child. Note: the diagonal line is the line of no change over time, where time 1 scores = time 2 scores.

The scores of eleven children were not plotted for the PBI items as the children all received a score of '0' at both pre-intervention and post-intervention.

Chapter Five

Discussion

The findings from the repeated measures in the current study suggest that the combined conflict resolution-mindfulness intervention resulted in no observable changes to the positive peer interactions of nine focus children, who were selected by the teacher for focused observations because they were considered to be likely to benefit from a programme that could improve their pro-social skills. Negative interactions mirrored positive interactions, also showing no improvement. However, the teacher report data from ratings of all the children in the class indicated a medium effect for positive interactions ($d=.50$) and a small effect for negative interactions ($d=.44$).

The repeated measures findings align with previous research of conflict resolution and mindfulness programmes for children. Singh et al. (2013) measured the positive, negative and neutral interactions of children in three classrooms in which teachers had received mindfulness training; findings indicated no change in positive interactions. Lee et al. (2008) reported only small effects for the reduction of externalising problems and behavioural anxiety symptoms. No effect for depressed symptoms was reported following participation in MBCT. Joyce et al. (2010) reported no effect for pro-social skills following mindfulness meditation training. Zucker et al. (2010) reported only small effects for improved pro-social skills, as assessed by teachers, and no effect for lowered levels of aggressive/disruptive behaviour following conflict resolution training. Bilgin (2008) and Güneri & Çoban (2004) reported no effect for improvements in children's use of conflict resolution techniques following conflict resolution training and Shuval et al. (2010) reported no effect for increased conflict self-efficacy following conflict resolution training.

A recent earthquake is one contextual factor that may explain why the focus children's positive interactions in the present study showed no indication of change following intervention. A devastating earthquake struck Christchurch in 2011 (Brown, 2011). Many students and schools were affected by the significant disruption and chaos that followed this event. Students were directly affected as schools were forced to remain closed for extended periods of time immediately following the earthquake and decisions about whether many Christchurch schools would be permanently closed or moved to new sites remained undecided for some time (Brown, 2011; Shaking Up Christchurch Education, 2011). The school in which the study took place was facing relocation to a new site and uncertainty about the new location remained. Amidst ongoing uncertainty, the school buildings and grounds were undergoing temporary repairs due to extensive damage which left multiple buildings unsafe for use. The negative effects of earthquakes can be enduring over several years and may include aggression, symptoms of depression, heightened feelings of anxiety and difficulties concentrating (Dunbar, 2013; Giannopoulou et al., 2006; Woodfeld, 2011). Although the school and community were experiencing ongoing secondary stressors during the present study, post-traumatic stress disorder and anxiety were not clinically assessed. However, the ongoing stressors may have overshadowed any positive effects of the intervention and may be related to the high variability in the nature of the children's interactions in different school settings.

A further possible reason for no observed change in the focus children's positive interactions is that they had already developed these skills through observing others. Although the teacher had nominated the focus children because they were assumed to benefit the most from the intervention, their baseline levels of positive interaction were all above 30% and above 60% for seven of the nine children. Thus, the focus children's interactions were already mostly positive and baseline levels in the current study were higher than the baseline levels

reported in a study by Singh et al. (2013). In the current study, the teacher reported pre-intervention that only two of the nine focus children sometimes destroyed or broke their own or others' belongings and six focus children were reported to engage in low rates of bullying behaviour or were cruel or mean to others. This differs from levels and types of violent and aggressive behaviour reported in previous studies. The types of problem behaviours reported in previous studies appear to be characterised by more violence than the types of aggression assessed in the current study and that are more typically seen in New Zealand schools (Barnes, 2007; Ministry of Education, 2009a). Beets et al. (2009) and Botvin et al. (2006) reported behaviours such as: fighting, causing harm to others, possession of a gun and threatening to hurt another person with a knife. In addition, O'Neill et al. (2011) and Zucker et al. (2010) reported higher levels of hitting others compared to the levels recorded in the current study. The combination of high rates of positive interaction and low levels of aggressive and violent behaviour suggest that children in the current study were less inclined to show change in their interactions following intervention due to already demonstrating high levels of positive behaviour and low levels of problem behaviour related to interaction with their peers. The researcher was dependent on one or more teachers in the school volunteering their class for the present study and so children with high levels of problematic and anti-social behaviour related to their interactions with peers could not specifically be selected.

One reason for the high baseline levels of positive interaction pre-intervention could be due to prior learning via observation. Bandura (as cited in Schneider, 2000) proposed that learning occurs within social contexts and primarily when a child interacts with their environment, via watching and modelling. Hattie (2009) and Schneider (2000) emphasised the positive influence peers can have on the facilitation of learning by offering students the opportunity to rehearse and practice various skills. There was an existing conflict resolution programme in the upper year levels of the study school. In this programme, selected students

in years five and six were trained as peer mediators to assist fellow students to effectively resolve conflict. Therefore, the study participants could have acquired the positive conflict reduction strategies from observing the older children around the school.

Another potential source for observational learning was from the non-focus children in the classroom who showed high levels of positive interactive behaviour pre-intervention. The focus children may have observed these children in the classroom engaging in positive interactions and, through this, developed the necessary skills to facilitate positive interactions with their own peers prior to the intervention.

The teacher's classroom management strategies may provide another reason for the results of no change. The levels of positive and negative interactions may have been related to the teacher's expectations for acceptable behaviour and consequences following unacceptable behaviour that the teacher implemented prior to and throughout the study. Classroom management techniques have been reported to increase the occurrence of positive interaction in the classroom and function as a protective factor for improved learning outcomes (Charles, 2008; Jennings & Greenberg, 2009; Lewis, Newcomer, Trussel, & Richter, 2006; Sugai & Horner, 2009). Teachers are influential in providing a classroom environment in which children can develop effective conflict resolution skills, cooperation skills and where pro-social behaviour is promoted (Jennings & Greenberg, 2009). The focus children may have developed effective tools to positively interact with their peers and manage problem behaviour as a result of having these strategies in place. Therefore, the classroom management system may have produced the relatively high levels of positive interaction during baseline.

In addition, participant characteristics may have affected the results. The children may have been too young; the focus children were all six years old during baseline. Previous studies involving conflict resolution or mindfulness programmes have typically involved

children ranging in age from eight-thirteen years (Beets et al., 2009; Joyce et al., 2010; Lee et al., 2008; Neace & Munoz, 2012; O'Neill et al., 2011; Roberts et al., 2007; Sale et al., 2012; Shuval et al., 2010; Zucker et al., 2010). Therefore, one possible explanation of the results of no change is that the participants in the current study were too young to learn the skills to a level that impacted on their observed behaviour.

However, participants in the two studies from which the skills for the present study were drawn were aged between four to eight years and the authors of those studies reported that six year old children did learn the skills (Allen, 2009; Napoli et al., 2005). In the present study, the findings of no change may be due to the cognitive skill level of six year old children. According to Piaget's cognitive model of development, children younger than seven are believed to function within a preoperational stage. During this stage, thinking is predominantly based on perception rather than logic and the ability to apply logic to thinking processes typically develops later than seven years of age (Grave & Blissett, 2004). In order to process information effectively and use reason to understand the meaning of information, a child must understand the given task and/or question. It has been suggested that children younger than eight years can engage in improved forms of reasoning as long as they understand a task and are able to integrate this learning with information from the wider context within which they interact (Grave & Blissett, 2004). In the present study it is possible that the examples given in the different role play exercises were too abstract for children to integrate the information with their own experiences. In addition, the information about the purpose of each skill and explanation for the correct use of each skill may not have been age appropriate and therefore the children may not have understood how to use the skills in their daily interactions. Causal reasoning develops throughout early childhood into adolescence and young children typically reason using external events to make sense of information. Children may therefore struggle to understand processes that cannot be observed or

understand information that is abstract (Grave & Blissett, 2004, p. 405). The 'breathe' and 'notice' intervention skills required children to rely on unobservable processes such as breathing and listening in order to self-regulate. It is possible that the children did not understand how to focus on the breathing process as it is not something concrete and observable and the act of listening to silence could have confused the children as they may not have understood what exactly they were asked to listen to.

Perspective taking abilities assist with understanding how another person is feeling (Gnepp & Klayman, 1992) and, although this skill is not fully developed by six years, children as young as five typically understand that different people experience a range of feelings in response to the same situation. According to Piaget's stages of cognitive development in children, the capacity to use introspection to make more complex connections between one's personal thoughts and feelings and those of others in relation to individual behaviour does not emerge until early adolescence (Carr, 2006). A study by Bilgin (2008) included intervention skills that involved children taking the perspective of another person and reported no effects, thus perspective taking may be a skill that is too complex for the capacity of young primary school children when used for the purpose of effective conflict resolution. Additionally, during the process of assessing personal emotions and the emotions of others, young children are prone to make incorrect conclusions that can lead to ineffective ways of interacting with others (Greenberg et al., 1995). The 'stop, sit, think' intervention skill required children to assess their personal feelings, how another person might be feeling and how best to behave and interact with another person. When implementing this skill, children may have been able to think about their own feelings and the feelings of others in terms of specific behaviour however, making sense of conclusions drawn and translating this knowledge to improve interaction with others may have been too complex. This is supported by results reported following participation in the PATHS curriculum (Greenberg et al., 1995).

Findings suggested that children showed no improvement in their ability to manage their emotions using a ‘traffic light’ skill as well as other emotion management skills that were taught. The PATHS curriculum traffic light skill bore similarities with the ‘stop, sit, think’ skill in the present study and involved children following three steps; (1) stopping to calm down, (2) thinking slowly about personal feelings and the feelings of others and (3) implementing a plan.

In constructing a sense of self, children below seven years of age are likely to find it difficult to describe themselves beyond concrete examples of behaviour, aspects of physical appearance and material belongings (Harter, 2013). The ability to self-evaluate emerges at approximately eight years. As a result, young children face limitations in their ability to self-evaluate and they tend to respond to how others evaluate them. For instance, if the teacher tells a child they are ‘good at listening’ they tend to believe they are ‘good at listening’ and will tell others they are ‘good at listening’. The ‘breathing’ skill intervention required children to evaluate their own breathing and compare it with the facilitator’s directions to determine if their breathing was accurate. The children may not have been able to do the self-evaluation and therefore may not have learnt the breathing skill.

Despite six years of age appearing appropriate for conflict resolution and mindfulness intervention, it has been suggested that developmental processes are more influential than intervention in the emergence of some aspects of pro-social skills (Greenberg et al., 1995; O’Neill et al., 2011). As cognitive development progresses, aggressive behaviour generally shows a decline in normal child development due to improved information processing abilities and effective coping mechanisms (Grave & Blissett, 2004). The developing cognitive abilities of the focus children may have limited the amount that they learnt during the intervention and may account for the results of no change in the current study.

Another participant factor that may explain the findings of no change in the focus children's positive interactions is gender. Previous research has shown mixed results for the role of gender in conflict resolution training. Enright and Knutson (2003) and Mendelson et al. (2010) controlled for gender effects and both studies reported no significant differences for boys or girls. Allen (2009) also controlled for gender and reported that boys received lower scores for peacemaking abilities pre-intervention than girls. However, gender effects were not significant post-intervention and the boys showed similar level improvements to the girls (Allen, 2009). In the present study the one focus girl was observed to show a higher level of positive interaction than the eight boys in baseline and subsequent phases on the repeated measures data. On the teacher report the one focus girl's score remained stable and the difference between her score and the focus boys' scores was not significant (Table 6). When considering the teacher report data for all children in the classroom, the girls in the classroom generally showed higher levels of positive behaviour related to peer interaction pre-intervention and post-intervention (Figure 5). The boys in the classroom generally showed higher levels of problem behaviour related to peer interaction at pre-intervention and post-intervention (Figure 5). However, because none of the focus children showed change in their positive interactions following intervention and previous research indicated no differences according to gender it is unlikely that gender had a large impact on findings in the current study.

The focus children's ethnicity may also explain the results. The focus children identified with different ethnic backgrounds. Due to the fact that no children showed indication of improvement following intervention it is unlikely that ethnicity played a large role in the results of no change, however, it should not be dismissed as a factor of interest. Previous conflict resolution and mindfulness research has not controlled for ethnicity in studies with children (Allen, 2009; Beets et al., 2009; Bilgin, 2008; Black & Fernando, 2013;

Güneri & Çoban, 2004; Joyce et al., 2010; Lee et al., 2008; Linares et al., 2005; Mehta et al., 2011; Napoli et al., 2005; Neace & Munoz, 2012; O'Neill et al., 2011; Roberts et al., 2004; Sale et al., 2012; Schonert-Reichl & Lawlor, 2010; Semple, Lee, Rosa, & Miller, 2010; Shuval et al., 2010; Singh et al., 2013; Zucker et al., 2010) and therefore, no clear conclusions can be made as to its potential influence in the current study. However, there may be cultural differences in ways of resolving conflict and adapting the curriculum to include these may strengthen the programme uptake for children from different cultural backgrounds. In different studies involving Turkish elementary school students, Güneri and Çoban (2004) and Bilgin (2008) implemented two different conflict resolution training programmes that were based on interventions that had been originally developed in the USA. The authors of both studies reported no effects for increased use of conflict resolution strategies by students following intervention. In light of the study findings, Bilgin (2008) emphasised the importance of considering cultural norms relating to conflict resolution when delivering such programmes to children in order to ensure the programme is culturally relevant and specific. Therefore, in the present study adaptations to the curriculum targeting cultural differences inherent to the process of conflict resolution may have produced different results.

The focus children's positive interactions may not have shown a change due to the time of day during which observations occurred. Direct observation of each of the nine focus children was generally conducted during instructional teaching time and very few observation sessions occurred at times of free play. Because the expectation of children during instructional teaching time was to complete curriculum-based tasks, a reduced opportunity for positive interaction was available. Thus, one potential limitation of the present study was scheduling observations during time periods of limited opportunity for interactions. However, Singh et al. (2013) observed the interactions of children during free play and also reported no effect for positive interactions. Therefore, it is unlikely that altering the time of the

observation to occur during free play would have changed the results but it might have provided more accurate measures. A second characteristic of the direct observations that may have contributed to the results of no change is the impact of the observer's presence. Landau and Swerdlik (2005) cautioned that the presence of an observer during direct observation may reduce the occurrence of certain behaviours, for example hitting, kicking and various forms of bullying. It is therefore possible that the presence of the observer reduced the likelihood of negative interaction between the focus children and their peers.

Data on all children in the classroom was collected using a pre-post rating scale (teacher report) completed by the teacher. Findings for positive interactions were congruent with a medium intervention effect and negative interaction with a small intervention effect. The difference in results between the observational data and the teacher report data may be related to the reliability of teacher reports. Low correlations between teacher reports and observational data on social skills have been reported by Cost and Simpson (2004). Elliot et al. (1993) recommended that teacher-reports be used with additional methods of measurement in an attempt to increase the external validity and reliability of findings.

While the present study did have both observation and teacher report measures, the teacher report measures may have been limited by common bias and due to the teacher being actively involved in the intervention. Factors that have been found to contribute to informant bias include the views the informant has about the origin of a child's behaviour as well as the importance placed on a behaviour (De Los Reyes & Kazdin, 2005). Further influencing factors include whether a particular child is liked by the teacher-informant, how well the child is known, the level of importance placed on a child being represented positively and the child's academic ability (Epps, Park, Huston, & Ripke, 2003; Rust, 2009). The girls in the classroom received higher scores of positive behaviour related to peer interaction in comparison to the boys on the teacher reports. In line with these differences, the teacher's

response to different items may have been impacted by a ‘Halo effect’ (Nisbett & Wilson, 1977). The Halo effect is an old term that is common to social psychology and involves broad evaluations influencing the assessment of an individual (Nisbett & Wilson, 1977). For example, the teacher may have viewed all the girls in the classroom as generally more positive in their interactions and therefore given each girl a higher score than the boys. The teacher co-facilitated two intervention sessions and was present in the classroom at all times throughout the study. As a result, the teacher’s responses may have been influenced through knowing the components of the intervention and being somewhat invested in children learning the skills. Burke (2010) identified the use of teachers as informants who were not blind to the intervention to be a common limitation in mindfulness research that can impact the generalisation of study findings. The teacher may have wanted to assist the researcher in completing the study successfully and may therefore have responded favourably. These potential influences are reflective of a social desirability bias common to the administration of rating scales (Rust and Golombok, 2009). Despite limitations and possible informant biases (Elliot et al., 1993), conflict resolution and mindfulness intervention research has routinely included the use of rating scales alongside the use of student self reports and parent reports (Allen, 2009; Beets et al., 2009; Joyce et al., 2010; Linares et al., 2005; Mehta et al., 2011; Napoli et al., 2005; Sale et al., 2012; Schonert-Reichl & Lawlor, 2010; Zucker et al., 2010). In the present study, responses to teacher report items may have been influenced by various forms of informant bias and therefore, caution is advised when considering the results of the pre-post teacher report findings.

The quality of the intervention may have affected the results. In both the PP (Allen, 2009) and the AAP (Napoli et al., 2005), from which the skills were drawn, it appeared that the intervention skills and strategies were taught sequentially. In these two programmes each skill built upon the skill taught in the previous session. Also, the total number of skills taught

in the PP was five and the AAP included more than 10 strategies. The planned intervention in the current study included a total of six skills taught over 18 sessions. However, following adaptations the intervention was limited to four skills taught over 12 sessions. The reduction of the number of skills from six to four resulted in a more narrow range of skills being taught. The sequence in which the skills were taught was also different to the sequence in which skills were taught in both the PP (Allen, 2009) and the AAP (Napoli et al., 2005). Both of these factors may have had an impact on whether the intervention was effective and therefore, the results of the study.

The length of time between the introduction of each new skill is an element of the intervention that may help explain the results of the study. The teaching of one skill was quickly followed by the teaching of the next skill in the following week. There was no lengthy amount of time available for children to practice newly learnt skills. Repeated and purposeful practise is vital to the efficient learning of new skills and this has been associated with improved cognitive abilities that assist with performing the new skill to the highest level (Hattie, 2009; Thompson & Gauntlett-Gilbert, 2008). An increased length of time in between the teaching of each skill may have been beneficial. Perhaps the expectation that children would learn and master each skill with little time given for practise was unreasonable. The fast pace of the intervention may have overwhelmed the children, affecting their capacity to learn efficiently. The length of each phase may have also contributed to the results of no change and the experimental phase in particular may have been too short. Some previous conflict resolution programmes that have shown good effects were implemented as a curriculum and therefore were delivered over the period of one or more school years (Beets et al., 2009; Neace & Munoz, 2012; O'Neill et al., 2011). The increased length and exposure is likely to have allowed for more skill practice opportunities and higher exposure to intervention material via a larger number of sessions. Napoli et al. (2005) reported good

effects following 24 weeks of mindfulness instruction. Furthermore, Napoli et al. (2005) recommended a minimum number of 10 sessions offering sufficient in-session skill practice opportunities for mindfulness intervention to be successful. Linares et al. (2005) and Sale et al. (2012) implemented mindfulness programmes over the period of two school years and ten weeks respectively and reported good effects. The short length of the experimental phase in the current study offered less skill practice opportunities for children to consolidate their learning than in previous studies. Findings from the research suggest that extending the experimental phase to take place over a longer period of time may have had an impact on the results and led to different outcomes.

In addition to the short length of instruction and the reduced amount of time available for children to practise, the limited scope of the intervention may also explain the results of no change. The present study was based in the classroom and the intervention did not target the wider school environment or incorporate the children's home environment. In addition to teaching students skills, one previous intervention study also focused on developing a positive school atmosphere (Beets et al., 2009) by actively reinforcing the values of the intervention programme throughout the whole school. Two studies also targeted a positive classroom environment (Linares et al., 2005; Roberts et al., 2007) and several mindfulness studies integrated both formal and informal opportunities for children to practice intervention skills at different times throughout the school day outside of intervention sessions (Black & Fernando, 2013; Linares et al., 2005; Schonert-Reichl & Lawlor, 2010). Semple et al. (2010) encouraged parental involvement through parent focused sessions that aligned with the intervention session content delivered to students and Allen (2009) gave parents written information on a weekly basis informing them of individual session content and goals. Several studies also included homework activities to promote the generalisation of skills (Allen, 2009; Joyce et al., 2010; Lee et al., 2008; Linares et al., 2005; Semple et al., 2010; Singh et al., 2013).

Thompson and Gauntlett-Gilbert (2008) emphasised the importance of involving parents in mindfulness interventions with children as a way of increasing parents' understanding of both the conceptual aspects of mindfulness and the utility of mindfulness strategies thus supporting children to implement the skills effectively. Perhaps broadening the scope of the intervention in the present study to include a focus on the wider school context, an aspect of parental involvement and/or homework tasks would have offered increased student proficiency in implementing the intervention skills. Students need to practise newly learnt skills in multiple contexts in order to develop a sense of proficiency as this allows for students to establish fluency in applying the skills, rather than simply developing knowledge and information regarding a skill (Hattie, 2009; Thompson & Gauntlett-Gilbert, 2008).

The process involved in selecting the intervention skills for inclusion may have resulted in the chosen skills being less than optimal. The researcher selected the skills based simply on which skills appeared most appropriate according to three loose guidelines. These guidelines were whether each skill appeared developmentally appropriate for children aged five to eight years, whether each skill was likely to contribute to children learning improved conflict resolution, self-management skills and was supportive of positive interactions with peers and whether each skill could be taught over short period of time in order to comply with the amount of teaching time available. Greenberg et al. (1995) reported good effects for basic feeling knowledge in children however; no effects were reported for more complex processes involved in emotion knowledge. It is possible that the skills focused on simple emotion knowledge that were delivered in the PATHS curriculum (Greenberg et al., 1995) may have been more appropriate for six year old children than the complex skills selected for inclusion in the present study. A more rigorous curriculum selection process may have ensured that the skills selected for inclusion were the most appropriate for the developmental age of the children. Unsuitable intervention skills are likely to have had an impact on the children's

understanding of the skills, the children's capacity to internalise the skills and the likelihood of the children using the skills effectively in the future.

The act of combining four skills into one programme is a further intervention factor that may account for the results of no change. There is no evidence indicating that a combined conflict resolution and mindfulness intervention programme has been implemented with children in previous research. The combination of conflict resolution and mindfulness skills may have caused the children confusion. Also, the language used to explain the skills and practice exercises may not have been clear, simple or specific enough for the children to develop an understanding of how to use the skills with their peers. Hattie (2009) reiterated the importance of being aware of what children already know and of monitoring whether children accurately understand the goal, topic and content of each session when teaching in order to foster children's learning. The PP (Allen, 2009) focused on the theme of peace and used a variety of words and metaphors to explain the meaning of peace throughout each session. The AAP (Napoli et al., 2005) included terms specific to the concept of mindfulness. The terms used to teach the different skills in the current intervention are likely to have differed from the terms used in the PP and the AAP and this, alongside possible confusion, may have had an impact on the results of the present study.

The instructional methods used for teaching the intervention may explain the results. The intervention sessions were primarily taught using direct instruction. Teaching strategies such as direct instruction, problem-based learning and cooperative learning have been linked to levels of student achievement and skill acquisition (Hattie, 2009). Hattie (2009) reported a medium effect size for direct instruction, indicating that this is a moderately effective teaching strategy. The use of direct instruction is therefore likely to be appropriate in the current study. However, the researcher was not experienced in teaching in a classroom setting. The

researcher's limited experience may have affected the quality of direct instruction and the results of the study.

Limitations

A limitation in the participant selection process was that all children in the classroom and specifically the focus children already engaged in relatively high rates of positive interaction during baseline. In a study by Singh et al. (2013) children engaged in a lower rate of positive interaction; on average 30% of participants' interactions were positive in baseline. The results of the present study and those reported by Singh et al. (2013) are somewhat difficult to compare because the positive interactions of all participants were averaged across each phase of the study conducted by Singh et al. (2013) and were not reported for each child per day as was the case in the current study. However, the lower levels of positive interaction suggested that there was more room for children to improve in their ability to interact positively with their peers. The higher levels of positive interaction pre-intervention (above 60% for seven of the nine focus children) in the current study suggested less room for improvement. The selection of a sample of children who demonstrated lower levels of positive peer interaction may have produced different results.

The selection of the target variable is a limitation of the present study. Measuring positive peer interaction may have contributed to the lack of change. This is a problem shared across the research domain as research shows no evidence of a reliable measurement variable that captures potential changes following combined conflict resolution and mindfulness intervention. Singh et al. (2013) selected positive peer interaction as the outcome variable in their study and found no effects following mindfulness intervention. Mendelson et al. (2010) measured two aspects of students' relationships with friends including communication with friends and trust in friends. In their study a small effect was reported for trust in friends and no effect was reported for communication with friends. However, in the study the focus of the

student self report was on aspects of the relationship that a student felt they had with their friends rather than on the positive or negative interactions a student engaged in with their peers and because of this the results are difficult to compare with those of the current study. Previous conflict resolution intervention studies that have reported good effects involved measurement of one or more of the following variables: conflict strategies, conflict resolution skill knowledge, conflict resolution skill acquisition, health promoting skills, social skills, pro-social behaviour, aggression and violent behaviour (Allen, 2009; Beets et al., 2009; Neace & Munoz, 2012; O'Neill et al., 2011; Roberts et al., 2007). Mindfulness intervention research in which good effects were reported measured one or more of the following variables: self-efficacy, social emotional competence, social interaction, social skills, self-control, respect for others, optimism, yoga meditation, anxiety, attention, Attention Deficit Hyperactivity Disorder (ADHD) symptoms, depressive symptoms, behaviour problems, positive and negative affect, problem solving skills, classroom climate and on-task behaviour (Black & Fernando, 2013; Carboni et al., 2013; Linares et al., 2005; Mehta et al., 2011; Napoli et al., 2005; Sale et al., 2012; Schonert-Reichl & Lawlor, 2010; Semple et al., 2010). Further, several conflict resolution and mindfulness studies used more than one variable to measure intervention effects (Beets et al., 2009; Black & Fernando, 2013; Joyce et al., 2010; Linares et al., 2005; Mehta et al., 2011; Napoli et al., 2005; Neace & Munoz, 2012; O'Neill et al., 2011; Schonert-Reichl & Lawlor, 2010; Semple, 2010; Shuval et al., 2010; Zucker et al., 2010). Potential changes in the focus children's behaviour and interactions may not have been accurately captured by the measurement of positive peer interactions, and/or positive peer interaction as a target variable may not have been responsive to changes following the combined conflict resolution-mindfulness intervention. In addition, the reliance on only one outcome variable may have limited the likelihood of detecting potential change. Therefore,

the selection of one or more of the above variables in place of, or in addition to, positive peer interaction may have been more suitable.

A limitation in the repeated measures is the absence of inter-rater reliability checks of observation data and of fidelity of the intervention implementation. The researcher conducted all the direct observations of the nine focus children. According to Horner et al. (2005), inter-rater reliability measurement is fundamental in the credibility of single case research.

Reliability checks were also not carried out on the teaching of the intervention, possibly limiting the fidelity of implementation (Gresham, 1996). Unfortunately, a lack of resources prevented the training and utilization of a second observer, which weakened the study's reliability.

The measurement instruments are a limitation of the present study. The complete Behaviour Problem Index includes a depressed/withdrawn subscale (Epps et al., 2003; Peterson & Zill, 1986) that assesses symptoms of anxiety but this was not included in the teacher report items for the present study. Previous mindfulness intervention studies have reported small effects where anxiety symptoms were measured (Lee et al., 2008; Lierh & Diaz, 2010; Napoli et al., 2005; Semple et al., 2010) and small to medium effects for the reduction of depressed symptoms (Joyce et al., 2010; Lierh & Diaz, 2010). Based on this research, the inclusion of a measurement scale for anxiety and/or depressed symptoms may have produced different results in the present study. A second limitation is the lack of continuity between the variables measured by the teacher report and the variables defined for measurement via direct observation. As assessed by the teacher, the focus children were reported to engage in different levels and types of positive and negative behaviour when interacting with their peers pre-intervention. Ashton demonstrated kindness, consideration, and he was also helpful whereas John was not highly positive in his interactions. John, Michael and Sam lied and cheated at times while Eric and Melanie struggled to get on with

other children of similar age. William demonstrated some ability to wait his turn when playing with others but he did not show consideration toward others. Harry got along well with his peers and he showed no signs of negative interactive behaviour. The same definitions for behaviours measured by the teacher report were not used for the measurement of peer interactions in the direct observations. Due to the differing levels of teacher reported behaviour pre-intervention and in an attempt to achieve continuity across measurement methods, the same definitions of behaviour are likely to have been useful to include in both assessment methods.

A limitation in the generality of the study findings was that the intervention was not culturally adapted to the bicultural context of New Zealand. An awareness of Maori values or 'Tikanga' is important for any person working in New Zealand. In attending to Tikanga, one encourages positive outcomes and supports children to reach their full potential (Ware & Walsh-Tapiata, 2010). The inclusion and involvement of both whanau members and wider support people is important when working with children from all ethnic backgrounds and is an aspect that Maori in particular value during the engagement process (Durie, 2005). The inclusion of whanau members may therefore have been particularly relevant for the three children from non-European backgrounds and may have improved the results of the study. Incorporating or adapting the intervention to include bicultural content and involving children's wider whanau would be critical issues to attend to in any wider utilisation of conflict resolution and mindfulness programmes within schools in Aotearoa/New Zealand.

Implications for Practice

The present research included direct observation of individual children's behaviour thus adding to the small number of previous research studies that also used direct observation (Carboni et al., 2013; Singh et al., 2013). Direct observation has been recommended to

address inherent limitations in teacher reports (Elliot et al., 1993) and therefore is valuable in the measurement of individual behaviour change.

Children aged six years may not have the cognitive abilities to understand many of the concepts involved in learning conflict resolution and/or mindfulness skills. It is known that children of this age do not have fully developed capacity to use reasoning and logical thinking for processing new information (Grave & Blissett, 2004), or taking the perspective of others (Bilgin, 2008; Greenberg, 1995) or self-evaluation (Harter, 2013). The findings of good effects reported in previous conflict resolution and/or mindfulness intervention studies with children aged predominantly eight to thirteen years (Beets et al., 2009; Carboni et al. 2013; Flook et al. 2013; Joyce et al., 2010; Klatt, 2013; Lierh & Diaz, 2010; Mendelson, 2010; Neace & Munoz, 2012; O'Neill et al., 2011; Roberts et al., 2007; Sale et al., 2012; Schonert-Reichl and Lawlor, 2010; Semple et al., 2010) together with the findings of no change for the nine children who were aged six years in the present study support the use of conflict resolution and mindfulness intervention with children older than eight years.

Directions for Future Research

The findings of the current study may have ramifications for teaching children social skills that promote positive interaction with peers in the classroom environment. The combined conflict resolution-mindfulness intervention showed no effects for nine children in a mainstream primary school classroom. Previous research indicates that conflict resolution programmes have shown good effects for children with behavioural problems and academic difficulties (Sale et al., 2012). Mindfulness programmes have shown good outcomes for children with diagnoses of Attention Deficit Hyperactivity Disorder ([ADHD] Carboni et al., 2013; Mehta et al., 2011), reading difficulties (Semple et al., 2010) and anxiety and/or depressed symptoms (Joyce et al., 2010; Lee et al., 2008; Liehr & Diaz, 2010; Napoli et al., 2005; Semple et al., 2010). Future research is recommended with participants who experience

difficulties at a clinical level due to the positive outcomes reported in previous research for these populations.

Future research should incorporate an increased number of intervention sessions in order to offer enough opportunity for children to practise newly learnt skills thus increasing the likelihood that children will develop fluency in implementing the skills. Previous research has shown good effects for programmes implemented for between six months and two school years (Beets et al., 2009; Greenberg et al., 1995; Napoli et al., 2005; Neace & Munoz, 2012; O'Neill et al., 2011; Sale et al., 2012). It is likely that positive outcomes as a result of increased exposure to intervention would justify the cost and time in providing such an extensive programme.

Conclusion

Direct observations of interactions in classrooms can provide a valuable picture of how children relate with others. Classrooms in which peer interaction is generally positive are likely to foster improved well-being of teachers and students as well as support a productive and pleasant classroom environment for all in which to learn and achieve. Children who have well developed pro-social skills are likely to develop more positive relationships throughout their school years and into adulthood. While conflict resolution programmes and mindfulness programmes have shown good effects, the combined intervention delivered in the current study showed no improvements in the positive peer interactions of nine focus children aged six years. Teacher reports of behaviour showed medium to small effects however, measurement bias are likely to have reduced the reliability of these results. When considered together, the findings from the current research study and those reported in previous research studies suggest that careful consideration must be given to the developmental stage at which children are functioning prior to intervening with conflict resolution and/or mindfulness training. This will ensure that intervention is both age appropriate and is likely to be effective

for young primary school children. Thought must also be given to the length of the programme to ensure young children receive adequate opportunity to practise newly learnt information and to support the consolidation of their learning.

References

- Aber, J. L., Brown, J. L., Chaudry, N., Jones, S. M., & Samples, F. (1996). The evaluation of the resolving conflict creatively program: An overview. *American Journal of Preventive Medicine, 12*(5), 82–90.
- Achenbach, T. M., & Edelbrock, C. S. (1981). Behavioral problems and competencies reported by parents of normal and disturbed children aged four through sixteen. *Monographs of the Society for Research in Child Development, 46*(1), 1–82.
doi:10.1111/1540-5834.ep11867664
- Allen, S. (2009). A study of a violence prevention program in prekindergarten classrooms. *Children & Schools, 31*(3), 177–187.
- Asendorpf, J. B., Warkentin, V., & Baudonnière, P. M. (1996). Self-awareness and other-awareness II: Mirror self-recognition, social contingency awareness, and synchronic imitation. *Developmental Psychology, 32*(2), 313–321. doi:10.1037/0012-1649.32.2.313
- Bailey, J. S., & Burch, M. R. (2002). *Research methods in applied behavior analysis*. Thousand Oaks, CA: Sage Publications.
- Balderson, D., & Sharpe, T. (2005). The effects of personal accountability and personal responsibility instruction on select off-task and positive social behaviors. *Journal of Teaching in Physical Education, 24*(1), 66.
- Barnes, B. E. (2007). Conflict resolution education in the Asian Pacific. *Conflict Resolution Quarterly, 25*(1), 55–60. doi:10.1002/crq.190
- Barrish, H. H., Saunders, M., & Wolf, M. M. (1969). Good behavior game: Effects of individual contingencies for group consequences on disruptive behavior in a

- classroom. *Journal of Applied Behavior Analysis*, 2(2), 119–124.
doi:10.1901/jaba.1969.2-119
- Baumrind, D., & Black, A. E. (1967). Socialization practices associated with dimensions of competence in preschool boys and girls. *Child Development*, 38(2), 291.
- Beaman, R., Wheldall, K., & Kemp, C. (2007). Recent research on troublesome classroom behaviour: A review. *Australasian Journal of Special Education*, 31(1), 45–60.
- Bear, G. G. (2010). *School discipline and self-discipline a practical guide to promoting prosocial student behavior*. Retrieved from
http://www.canterbury.eblib.com.au/EBLWeb/patron?target=patron&extendedid=P_533870_0&
- Beets, M. W., Flay, B. R., Vuchinich, S., Snyder, F. J., Acock, A., Burns, K., ... Durlak, J. (2009). Use of a social and character development program to prevent substance use, violent behaviors, and sexual activity among elementary-school students in Hawaii. *American Journal of Public Health*, 99(8), 1438–1445.
- Benedict, E. A., Horner, R. H., & Squires, J. K. (2007). Assessment and implementation of positive behavior support in preschools. *Topics in Early Childhood Special Education*, 27(3), 174–192. doi:10.1177/02711214070270030801
- Bilgin, A. (2008). The impact of conflict resolution training on elementary school children. *Elementary Education Online*, 7(3), 541–556.
- Black, D. S., & Fernando, R. (2013). Mindfulness training and classroom behavior among lower-income and ethnic minority elementary school children. *Journal of Child and Family Studies*. doi:10.1007/s10826-013-9784-4
- Blair, C. (2002). School readiness: Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist*, 57(2), 111–127. doi:10.1037/0003-066X.57.2.111

- Blampied, N. M. (1999). A legacy neglected: Restating the case for single-case research in cognitive-behaviour therapy. *Behaviour Change*, *16*(2), 89–104.
doi:10.1375/bech.16.2.89
- Blampied, N. M. (2001). The third way: Single-case research, training, and practice in clinical psychology. *Australian Psychologist*, *36*(2), 157–163.
doi:10.1080/00050060108259648
- Blampied, N.M. (2007, August). Single-case research: Adaptations for the analysis of group data. Paper presented at the Association for Behavior Analysis International Convention, Sydney, Australia.
- Blampied, N.M. (2008, September). Adapting single-case designs for research on groups. Paper presented at the Association for Behavior Analysis International Education Convention on Evidence-based Practice, Scientifically-based Instruction, and Educational Effectiveness, Reston, VA.
- Botvin, G. J., Griffin, K. W., & Nichols, T. D. (2006). Preventing youth violence and delinquency through a universal school-based prevention approach. *Prevention Science*, *7*(4), 403–408. doi:10.1007/s11121-006-0057-y
- Brown, R. (2011). Principles guiding practice and responses to recent community disasters in New Zealand. *New Zealand Journal of Psychology*, *40*(4), 86–89.
- Burke, C. A. (2010). Mindfulness-based approaches with children and adolescents: A preliminary review of current research in an emergent field. *Journal of Child and Family Studies*, *19*(2), 133–144. doi:10.1007/s10826-009-9282-x
- Butterwoth, G. (2001). Joint visual attention in infancy. In G. Bremner & A. Fogel (Eds.), *Blackwell Handbook of Infant Development* (pp. 213–240). Oxford, England: Blackwell Publishers.

- Caplan, M., Vespo, J., Pedersen, J., & Hay, D. F. (1991). Conflict and its resolution in small groups of one- and two-year-olds. *Child Development, 62*(6), 1513-1524.
doi:10.1111/1467-8624.ep9202105177
- Carboni, J. A., Roach, A. T., & Fredrick, L. D. (2013). Impact of mindfulness training on the behavior of elementary students with attention-deficit/hyperactive disorder. *Research in Human Development, 10*(3), 234–251. doi:10.1080/15427609.2013.818487
- Carr, A. (2006). *The handbook of child and adolescent clinical psychology: A contextual approach* (2nd ed.). New York, NY: Routledge.
- Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2002). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *Prevention & Treatment, 5*(1), 1-111.
doi:10.1037/1522-3736.5.1.515a
- Caygill, R., & Sok, S. (2008). *PISA 2006: School context of science achievement: How ready are our 15 year-olds for tomorrow's world?* Retrieved from http://www.educationcounts.govt.nz/publications/series/2543/PISA_2006/31278/5
- Charles, C. M. (2008). *Building classroom discipline* (9th ed.). Boston, MA: Allyn and Bacon.
- Charman, T., Baron-Cohen, S., Swettenham, J., Baird, G., Cox, A., & Drew, A. (2000). Testing joint attention, imitation, and play as infancy precursors to language and theory of mind. *Cognitive Development, 15*(4), 481–498. doi:10.1016/S0885-2014(01)00037-5
- Clayton, C. J., Ballif-Spanvill, B., & Hunsaker, M. D. (2001). Preventing violence and teaching peace: A review of promising and effective antiviolence, conflict-resolution, and peace programs for elementary school children. *Applied and Preventive Psychology, 10*(1), 1–35. doi:10.1016/S0962-1849(05)80030-7

- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum Associates.
- Collaborative for Academic, Social, and Emotional Learning. (2012). *2013 CASEL guide: Effective social and emotional learning programs—preschool and elementary school edition*. Retrieved from <http://www.casel.org/library/>
- Coolahan, K., & Fantuzzo, J. (2000). Preschool peer interactions and readiness to learn: Relationships between classroom peer play and learning behaviors and conduct. *Journal of Educational Psychology, 92*(3), 458-465.
- Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis* (2nd ed.). Upper Saddle River, NJ: Pearson.
- Cost, H. C., & Simpson, R. G. (2004). Behavioral assessment investigation: Direct observation and behavior ratings. *Research in the Schools, 11*(2), 51–60.
- Cowen, E. L. (1994). The enhancement of psychological wellness: Challenges and opportunities. *American Journal of Community Psychology, 22*(2), 149–179.
doi:10.1007/BF02506861
- Cumming, G. (2012). *Understanding the new statistics: Effect sizes, confidence intervals, and meta-analysis*. New York, NY: Routledge.
- De Los Reyes, A., & Kazdin, A. E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for further study. *Psychological Bulletin, 131*(4), 483-509.
- Denham, S. A., McKinley, M., Couchoud, E. A., & Holt, R. (1990). Emotional and behavioral predictors of preschool peer ratings. *Child Development, 61*(4), 1145–52.
- Denham, S. A., & Weissberg, R. P. (2004). Social-emotional learning in early childhood. In E. Chesebrough, P. King, T. P. Gullotta, & M. Bloom (Eds.), *A blueprint for the*

promotion of prosocial behavior in early childhood (pp. 13–50). New York, NY: Kluwer Academic.

Dennis, M. (1991). Frontal lobe function in childhood and adolescence: A heuristic for assessing attention regulation, executive control, and the intentional states important for social discourse. *Developmental Neuropsychology*, 7(3), 327–358.

doi:10.1080/87565649109540497

Dowsett, S. M., & Livesey, D. J. (2000). The development of inhibitory control in preschool children: Effects of “executive skills” training. *Developmental Psychobiology*, 36(2), 161–174. doi:10.1002/(SICI)1098-2302(200003)36:2<161::AID-DEV7>3.0.CO;2-0

Doyle, W. (2006). Ecological approaches to classroom management. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 97–125). New York, NY: Routledge.

Duby, J. (2011). Social and emotional development. In R. G. Voight, M. M. Macias & S. M. Myers (Eds.), *Developmental and behavioral pediatrics* (pp. 221–247). Elk Grove Village, IL: American Academy of Pediatrics.

Dunbar, J. (2013). Storms leave children quaking. Retrieved from <http://www.stuff.co.nz/the-press/news/christchurch-earthquake-2011/9478050/Storms-leave-children-quaking>

Dunn, J., & Cutting, A. L. (1999). Understanding others, and individual differences in friendship interactions in young children. *Social Development*, 8(2), 201–219.

doi:10.1111/1467-9507.00091

Durie, M. (2005, June). Whānau as a model for early intervention in conduct disorders. Paper presented at the Severe Conduct Disorder Conference, Wellington, New Zealand.

Eckerman, C. O., Davis, C. C., & Didow, S. M. (1989). Toddlers’ emerging ways of achieving social coordinations with a peer. *Child Development*, 60(2), 440–53.

- Eisenberg, N. (2006). Prosocial behavior. In G. G. Bear & K. M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 313-324). Bethesda, MD: National Association of School Psychologists.
- Eisenberg, N., Spinrad, T. L., & Eggum, N. D. (2010). Emotion-related self-regulation and its relation to children's maladjustment. *Annual Review of Clinical Psychology*, 6, 495–525. doi:10.1146/annurev.clinpsy.121208.131208
- Elliot, S. N., Busse, R., & Gresham, F. (1993). Behavior rating scales: Issues of use and development. *School Psychology Review*, 22(2), 313–21.
- Embry, D. D., Flannery, D. J., Vazsonyi, A. T., Powell, K. E., & Atha, H. (1996). PeaceBuilders: A theoretically driven, school-based model for early violence prevention. *American Journal of Preventive Medicine*, 12(5), 91–100.
- Enright, R. D., & Knutson, J. A. (2003). Waging peace through forgiveness education in Belfast. *Journal of Research*, 13(0), 63-78.
- Epps, S. R., Park, S. E., Huston, A. C., & Ripke, M. (2003, March). Psychometric analyses of the positive behavior scale in the new hope project and the panel study of income dynamics. Paper presented at the Child Trends Conference on Positive Outcomes, Washington DC, Child Trends.
- Fergusson, D. M., Horwood, L. J., & Ridder, E. M. (2005). Show me the child at seven: The consequences of conduct problems in childhood for psychosocial functioning in adulthood. *Journal of Child Psychology and Psychiatry*, 46(8), 837–849.
- Fergusson, D. M., Horwood, L. J., & Stanley, L. (2013). A preliminary evaluation of the incredible years teacher programme. *New Zealand Journal of Psychology*, 42(2), 51–56.
- Flannery, D. J., Vazsonyi, A. T., Liau, A. K., Guo, S., Powell, K. E., Atha, H., ... Embry, D. (2003). Initial behavior outcomes for the peacebuilders universal school-based

- violence prevention program. *Developmental Psychology*, 39(2), 292–308.
doi:10.1037/0012-1649.39.2.292
- Flay, B. R., & Allred, C. G. (2003). Long-term effects of the Positive Action® Program. *American Journal of Health Behavior*, 27(11), 6–21. doi:10.5993/AJHB.27.1.s1.2
- Flay, B. R., Allred, C. G., & Ordway, N. (2001). Effects of the positive action program on achievement and discipline: Two matched-control comparisons. *Prevention Science*, 2(2), 71–89. doi:10.1023/A:1011591613728
- Flook, L., Smalley, S. L., Kitil, M. J., Galla, B. M., Kaiser-Greenland, S., Locke, J., ... Kasari, C. (2010). Effects of mindful awareness practices on executive functions in elementary school children. *Journal of Applied School Psychology*, 26(1), 70–95. doi:10.1080/15377900903379125
- Ford, T., Edwards, V., Sharkey, S., Ukoumunne, O. C., Byford, S., Norwich, B., & Logan, S. (2012). Supporting teachers and children in schools: The effectiveness and cost-effectiveness of the incredible years teacher classroom management programme in primary school children: A cluster randomised controlled trial, with parallel economic and process evaluations. *BMC Public Health*, 12(1), 719–734. doi:10.1186/1471-2458-12-719
- Garrard, W. M., & Lipsey, M. W. (2007). Conflict resolution education and antisocial behavior in U.S. schools: A meta-analysis. *Conflict Resolution Quarterly*, 25(1), 9–38.
- Gates, C. (2013). School roll changes across Christchurch. Retrieved from <http://www.stuff.co.nz/the-press/news/schools/8319686/School-roll-changes-across-Christchurch>
- Giannopoulou, I., Strouthos, M., Smith, P., Dikaiakou, A., Galanopoulou, V., & Yule, W. (2006). Post-traumatic stress reactions of children and adolescents exposed to the Athens 1999 earthquake. *European Psychiatry*, 21(3), 160–166.

- Gnepp, J., & Klayman, J. (1992). Recognition of uncertainty in emotional inferences: Reasoning about emotionally equivocal situations. *Developmental Psychology*, 28(1), 145–158. doi:10.1037/0012-1649.28.1.145
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Child Psychology & Psychiatry & Allied Disciplines*, 38(5), 581–586. doi:10.1111/j.1469-7610.1997.tb01545.x
- Goren, P. (2009). *How policy travels: Making sense of Ka Hikitia-Managing for success: The Maori education strategy 2008-2012*. Retrieved from <http://www.minedu.govt.nz/>
- Grave, J., & Blissett, J. (2004). Is cognitive behavior therapy developmentally appropriate for young children? A critical review of the evidence. *Clinical Psychology Review*, 24(4), 399–420. doi:10.1016/j.cpr.2004.03.002
- Greenberg, M. T., Kusche, C. A., Cook, E. T., & Quamma, J. P. (1995). Promoting emotional competence in school-aged children: The effects of the PATHS curriculum. *Development and Psychopathology*, 7(1), 117–136. doi:10.1017/S0954579400006374
- Gresham, F. M. (1996). Treatment integrity in single-subject research. In R. D. Franklin, D. B. Allison, & B. S. Gorman (Eds.), *Design and analysis of single-case research* (pp. 93–117). Mahwah, NJ: Lawrence Erlbaum Associates.
- Gresham, F. M., & Elliott, S. N. (1987). The relationship between adaptive behavior and social skills: Issues in definition and assessment. *The Journal of Special Education*, 21(1), 167–181. doi:10.1177/002246698702100115
- Güneri, O. Y., & Çoban, R. (2004). The effect of conflict resolution training on Turkish elementary school students: A quasi-experimental investigation. *International Journal for the Advancement of Counselling*, 26(2), 109–124. doi:10.1023/B:ADCO.0000027425.24225.87

- Gunnar, M. R., & Donzella, B. (2002). Social regulation of the cortisol levels in early human development. *Psychoneuroendocrinology*, *27*(1-2), 199–220. doi:10.1016/S0306-4530(01)00045-2
- Guralnick, M. J. (1993). Developmentally appropriate practice in the assessment and intervention of children's peer relations. *Topics in Early Childhood Special Education*, *13*(3), 344–71.
- Harstad, E., & Barbaresi, W. (2011). Disruptive behavior disorders. In R. G. Voigt, M. M. Macais & S. M. Myers (Eds.), *Developmental and behavioral pediatrics* (pp. 349–358). Elk Grove Village, IL: American Academy of Pediatrics.
- Harter, S. (2013). Developmental processes in the construction of the self. In T. D. Yawkey & J. E. Johnson (Eds.), *Integrative Processes and Socialization: Early to middle childhood* (pp. 45–78). Hoboken, NJ: Taylor and Francis.
- Hartup, W. W. (1989). Social relationships and their developmental significance. *American Psychologist*, *44*(2), 120–126. doi:10.1037/0003-066X.44.2.120
- Haskett, M. E., Stelter, R., Proffit, K., & Nice, R. (2012). Parent emotional expressiveness and children's self-regulation: Associations with abused children's school functioning. *Child Abuse & Neglect: The International Journal*, *36*(4), 296–307.
- Hastings, P. D., Zahn-Waxler, C., Robinson, J., Usher, B., & Bridges, D. (2000). The development of concern for others in children with behavior problems. *Developmental Psychology*, *36*(5), 531–546. doi:10.1037/0012-1649.36.5.531
- Hattie, J. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. London, England: Routledge.
- Hay, D. F. (1985). Learning to form relationships in infancy: Parallel attainments with parents and peers. *Developmental Review*, *5*(2), 122–161. doi:10.1016/0273-2297(85)90007-3

- Hay, D. F., Payne, A., & Chadwick, A. (2004). Peer relations in childhood. *Journal of Child Psychology and Psychiatry*, *45*(1), 84–108. doi:10.1046/j.0021-9630.2003.00308.x
- Hofferth, S. L., & Sandberg, J. F. (2001). How American children spend their time. *Journal of Marriage and Family*, *63*(2), 295–308.
- Horner, R. H., Carr, E. G., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single-subject research to identify evidence-based practice in special education. *Exceptional Children*, *71*(2), 165–179.
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, *79*(1), 491–525.
- Johnson, D. W., Johnson, R. T., Dudley, B., & Magnuson, D. (1995). Training elementary school students to manage conflict. *Journal of Social Psychology*, *135*(6), 673–686.
- Joyce, A., ETTY-Leal, J., Zazryn, T., Hamilton, A., & Hased, C. (2010). Exploring a mindfulness meditation program on the mental health of upper primary children: A pilot study. *Advances in School Mental Health Promotion*, *3*(2), 17–25.
doi:10.1080/1754730X.2010.9715677
- Kabat-Zinn, J. (2005). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York, NY: Hyperion.
- Kellam, S. G., Brown, C. H., Poduska, J. M., Ialongo, N. S., Wang, W., Toyinbo, P., ... Wilcox, H. C. (2008). Effects of a universal classroom behavior management program in first and second grades on young adult behavioral, psychiatric, and social outcomes. *Drug and Alcohol Dependence*, *95*, (1), 5–28. doi:10.1016/j.drugalcdep.2008.01.004
- Kisiel, C., Blaustein, M., Spinazzola, J., Schmidt, C. S., Zucker, M., & Van der Kolk, B. (2006). Evaluation of a theater-based youth violence prevention program for elementary school children. *Journal of School Violence*, *5*(2), 19–36.

- Klatt, M., Harpster, K., Browne, E., White, S., & Case-Smith, J. (2013). Feasibility and preliminary outcomes for Move-Into-Learning: An arts-based mindfulness classroom intervention. *Journal of Positive Psychology, 8*(3), 233–241.
doi:10.1080/17439760.2013.779011
- Kopp, C. B. (1982). Antecedents of self-regulation: A developmental perspective. *Developmental Psychology, 18*(2), 199–214. doi:10.1037/0012-1649.18.2.199
- Ladd, G., & Burgess, K. B. (2001). Do relational risks and protective factors moderate the linkages between childhood aggression and early psychological and school adjustment? *Child Development, 72*(5), 1579-1600.
- Ladd, G., Kochenderfer, B., & Coleman, C. (1996). Friendship quality as a predictor of young children's early school adjustment. *Child Development, 67*(3), 1103–1118.
doi:10.1111/1467-8624.ep9704150186
- Ladd, G. W. (2005). *Children's peer relations and social competence: A century of progress*. New Haven, CT: Yale University Press.
- LaFreniere, P. J. (1996). Co-operation as a conditional strategy among peers: Influence of social ecology and kin relations. *International Journal of Behavioral Development, 19*(1), 39–52. doi:10.1080/016502596385929
- Landau, S., & Swerdlik, M. E. (2005). Commentary: What you see is what you get: A commentary on school-based direct observation systems. *School Psychology Review, 34*(4), 529–536.
- Lee, J., Semple, R. J., Rosa, D., & Miller, L. (2008). Mindfulness-based cognitive therapy for children: Results of a pilot study. *Journal of Cognitive Psychotherapy, 22*(1), 15–28.
doi:10.1891/0889.8391.22.1.15
- Leflot, G., Lier, P. A. C., Onghena, P., & Colpin, H. (2010). The role of teacher behavior management in the development of disruptive behaviors: An intervention study with

- the good behavior game. *Journal of Abnormal Child Psychology*, 38(6), 869–882.
doi:10.1007/s10802-010-9411-4
- Lewis, T. J., Newcomer, L., L., Trussel, R., & Richter, M. (2006). Schoolwide positive behavior support: Building systems to develop and maintain appropriate social behaviour. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 833–854). New York, NY: Routledge.
- Liaupsin, C. J., & Scott, T. M. (2008). Disruptive behavior. In R. J. Morris & N. Mather (Eds.), *Evidence-based interventions for students with learning and behavioral challenges* (pp. 59–78). New York, NY: Routledge.
- Liehr, P., & Diaz, N. (2010). A pilot study examining the effect of mindfulness on depression and anxiety for minority children. *Archives of Psychiatric Nursing*, 24(1), 69–71.
doi:10.1016/j.apnu.2009.10.001
- Linares, L. O., Rosbruch, N., Stern, M. B., Edwards, M. E., Walker, G., Abikoff, H. B., & Alvir, J. M. J. (2005). Developing cognitive-social-emotional competencies to enhance academic learning. *Psychology in the Schools*, 42(4), 405–417.
- Luiselli, J. K., Putnam, R. F., Handler, M. W., & Feinberg, A. B. (2005). Whole-school positive behaviour support: Effects on student discipline problems and academic performance. *Educational Psychology*, 25(2-3), 183–198.
- Lynch, E. C., & Beare, P. L. (1990). The quality of IEP objectives and their relevance to instruction for students with mental retardation and behavioral disorders. *Remedial and Special Education (RASE)*, 11(2), 48–55.
- Mages, W. K. (2004). Urban Improv: A portrait of an educational drama organization. *Youth Theatre Journal*, 18(1), 30–44.

- Mainieri, T. (2006). *The panel study of income dynamics child development supplement: User guide for CDS-II*. Retrieved from http://psidonline.isr.umich.edu/CDS/cdsii_userGd.pdf
- McCulloch, A., Wiggins, R. D., Joshi, H. E., & Sachdev, D. (2000). Internalising and externalising children's behaviour problems in Britain and the US: Relationships to family resources. *Children & Society, 14*(5), 368–83.
- McKown, C., Gumbiner, L. M., Russo, N. M., & Lipton, M. (2009). Social-emotional learning skill, self-regulation, and social competence in typically developing and clinic-referred children. *Journal of Clinical Child & Adolescent Psychology, 38*(6), 858–871. doi:10.1080/15374410903258934
- McLoyd, V. C. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting, and socioemotional development. *Child Development, 61*(2), 311–46.
- Mehta, S., Mehta, V., Mehta, S., Shah, D., Motiwala, A., Vardhan, J., ... Mehta, D. (2011). Multimodal behavior program for ADHD incorporating yoga and implemented by high school volunteers: A pilot study. *ISRN Pediatrics, 1–5*. doi:10.5402/2011/780745
- Mendelson, T., Greenberg, M. T., Dariotis, J. K., Gould, L. F., Rhoades, B. L., & Leaf, P. J. (2010). Feasibility and preliminary outcomes of a school-based mindfulness intervention for urban youth. *Journal of Abnormal Child Psychology, 38*(7), 985–994. doi:10.1007/s10802-010-9418-x
- Midgley, N., & Vrouva, I. (2012). *Minding the child*. New York, NY: Routledge.
- Ministry of Education. (2004). *The national education goals*. Retrieved from <http://www.minedu.govt.nz/theMinistry/EducationInNewZealand/EducationLegislation/TheNationalEducationGoalsNEGs.aspx>

- Ministry of Education. (2009a). *Guidelines for principles and boards of trustees on stand downs, suspensions, exclusions and expulsions, Part I*. Retrieved from <http://www.minedu.govt.nz/~media/MinEdu/Files/EducationSectors/PrimarySecondary/StandDownSuspensionExclusionExpulsions/SuspensionLegalGuideWEB.pdf>
- Ministry of Education. (2009b). *Good practice: Guidelines for principles and boards of trustees for managing behaviour that may or may not lead to stand downs, suspensions, exclusions and expulsions Part II*. Retrieved from <http://www.minedu.govt.nz/~media/MinEdu/Files/EducationSectors/PrimarySecondary/StandDownSuspensionExclusionExpulsions/SuspensionGoodPracticeWEB.pdf>
- Ministry of Education. (2011). *Annual Report 2011*. Retrieved from <http://www.minedu.govt.nz/~media/MinEdu/Files/TheMinistry/AnnualReport/2011/MOEAnnualReport2011Full.pdf>
- Ministry of Education. (2012a). *Positive behaviour for learning*. Retrieved from http://www.minedu.govt.nz/theMinistry/Consultation/~media/MinEdu/Files/TheMinistry/PositiveBehaviourForLearning/PB4LActionPlan_2012.pdf
- Ministry of Education. (2012b). *Annual Report 2012*. Retrieved from <http://www.minedu.govt.nz/~media/MinEdu/Files/TheMinistry/AnnualReport/2012/MOEAnnualReport2012FullWeb.pdf>
- Mitchell, D. (2001). Paradigm shifts in and around special education in New Zealand. *Cambridge Journal of Education*, 31(3), 319–335. doi:10.1080/03057640120086639
- Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., ... Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 108(7), 2693–2698. doi:10.1073/pnas.1010076108

- Murrow, K., Kalafatelis, E., Fryer, M., Ryan, N., Dowden, N., Hammond, K., & Edmonds, H. (2004). An evaluation of three programmes in the innovations funding pool Tu Tangata. Retrieved from http://www.educationcounts.govt.nz/_data/assets/pdf_file/0017/7037/innovations-tu-tangata.pdf
- Napoli, M., Krech, P. R., & Holley, L. C. (2005). Mindfulness training for elementary school students: The attention academy. *Journal of Applied School Psychology, 21*(1), 99–125.
- Neace, W. P., & Munoz, M. A. (2012). Pushing the boundaries of education: Evaluating the impact of second step: A violence prevention curriculum with psychosocial and non-cognitive measures. *Child & Youth Services, 33*(1), 46–69.
- Neuenschwander, R., Rothlisberger, M., Cimeli, P., & Roebbers, C. M. (2012). How do different aspects of self-regulation predict successful adaptation to school? *Journal of Experimental Child Psychology, 113*(3), 353–371.
- Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of Personality and Social Psychology, 35*(4), 250.
- Nock, M. K., & Kurtz, S. M. S. (2005). Direct behavioral observation in school settings: Bringing science to practice. *Cognitive and Behavioral Practice, 12*(3), 359–370. doi:10.1016/S1077-7229(05)80058-6
- O'Neill, Clark, & Jones, J. A. (2011). Promoting mental health and preventing substance abuse and violence in elementary students: A randomized control study of the Michigan Model for Health. *Journal of School Health, 81*(6), 320–330.
- O'Shea, M. M. (2004). What do we know about how children learn? The social, intellectual and cognitive development of children. In E. Chesebrough, P. King, T. P. Gullotta, &

- M. Bloom (Eds.), *A blueprint for the promotion of prosocial behavior in early childhood* (pp. 1–11). New York, NY: Kluwer Academic.
- Parsonson, B. S., & Baer. (1992). The visual analysis of data, and current research into the stimuli controlling it. In T. R. Kratochwill & J. R. Levin (Eds.), *Single-case research design and analysis: New directions for psychology and education* (pp. 15–40). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. *American Psychologist*, *44*(2), 329–335. doi:10.1037/0003-066X.44.2.329
- Peterson, J. L., & Zill, N. (1986). Marital disruption, parent-child relationships, and behavior problems in children. *Journal of Marriage and the Family*, *48*(2), 295-307. doi:10.2307/352397
- Piotrowski, J., Lapierre, M., & Linebarger, D. (2013). Investigating correlates of self-regulation in early childhood with a representative sample of english-speaking American families. *Journal of Child & Family Studies*, *22*(3), 423–436. doi:10.1007/s10826-012-9595-z
- Pipan, M. E., & Blum, N. J. (2011). Basics of child behaviour and primary care management of common behavioural problems. In R. G. Voight, M. M. Macais, & S. M. Myers (Eds.), *Developmental and behavioral pediatrics* (pp. 37–57). Elk Grove Village, IL: American Academy of Pediatrics.
- Rhoades, B. L., Greenberg, M. T., & Domitrovich, C. E. (2009). The contribution of inhibitory control to preschoolers' social-emotional competence. *Journal of Applied Developmental Psychology*, *30*(3), 310–320.
- Rimrn-Kaufman, S. E., Curby, T. W., Grimm, K. J., Nathanson, L., & Brock, L. L. (2009). The contribution of children's self-regulation and classroom quality to children's

- adaptive behaviors in the kindergarten classroom. *Developmental Psychology*, 45(4), 958–972. doi:10.1037/a0015861
- Roberts, L., White, G., & Yeomans, P. (2004). Theory development and evaluation of project WIN: A violence reduction program for early adolescents. *Journal of Early Adolescence*, 24(4), 460–483. doi:10.1177/0272431604268547
- Roberts, L., Yeomans, P., & Ferro-Almeida, S. (2007). Project WIN evaluation shows decreased violence and improved conflict resolution skills for middle school students. *RMLE Online: Research in Middle Level Education*, 30(8), 1–14.
- Robinson, S. L., & Griesemer, S. M. (2006). Helping individual students with problem behavior. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice and contemporary issues* (pp. 787–802). New York, NY: Routledge.
- Rust, J. (2009). *Modern psychometrics: The science of psychological assessment* (3rd ed.). London, England: Routledge.
- Sagi, A., & Hoffman, M. L. (1976). Empathic distress in the newborn. *Developmental Psychology*, 12(2), 175–176. doi:10.1037/0012-1649.12.2.175
- Sale, E., Weil, V., & Kryah, R. (2012). An exploratory investigation of the promoting responsibility through education and prevention (PREP) after school program for African American at-risk elementary school students. *School Social Work Journal*, 36(2), 56–72.
- Saltzman, A., & Goldin, P. (2008). Mindfulness-based stress reduction for school-age children. In L. A. Greco & S. C. Hayes (Eds.), *Acceptance and mindfulness treatments for children and adolescents* (pp. 139–161). Oakland, CA: New Harbinger Publications.

- Sanders, M. R., & Mazzucchelli, T. G. (2013). The promotion of self-regulation through parenting interventions. *Clinical Child and Family Psychology Review*, *16*(1), 1–17.
- Schlosser, L. K. (1992). Teacher distance and student disengagement: School lives on the margin. *Journal of Teacher Education*, *43*(2), 128–40.
- Schneider, B. (2000). *Friends and enemies: Peer relations in childhood*. London, England: Arnold.
- Schonert-Reichl, K. A., & Lawlor, M. S. (2010). The effects of a mindfulness-based education program on pre- and early adolescents' well-being and social and emotional competence. *Mindfulness*, *1*(3), 137–151. doi:10.1007/s12671-010-0011-8
- Segal, Z. V. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York, NY: Guilford Press.
- Semple, R. J., Lee, J., Rosa, D., & Miller, L. F. (2010). A randomized trial of mindfulness-based cognitive therapy for children: Promoting mindful attention to enhance social-emotional resiliency in children. *Journal of Child & Family Studies*, *19*(2), 218–229. doi:10.1007/s10826-009-9301-y
- Shaking Up Christchurch Education. (2011). Opportunities and challenges: Creating a compelling vision and direction for education in Christchurch. Retrieved from <http://blog.core-ed.org/derek/files/2011/09/SUCE-Concept-Plan-Final-14-09-11.pdf>
- Sheets, R. H. (2002). “You’re just a kid that’s there”-chicano perception of disciplinary events. *Journal of Latinos and Education*, *1*(2), 105–122. doi:10.1207/S1532771XJLE0102_3
- Shores, R. E., Jack, S. L., Gunter, P. L., Ellis, D. N., DeBriere, T. J., & Wehby, J. H. (1993). Classroom interactions of children with behavior disorders. *Journal of Emotional and Behavioral Disorders*, *1*(1), 27–39. doi:10.1177/106342669300100106

- Shuval, K., Pillsbury, C. A., Cavanaugh, B., McGruder, L., McKinney, C. M., Massey, Z., & Groce, N. E. (2010). Evaluating the impact of conflict resolution on urban children's violence-related attitudes and behaviors in New Haven, Connecticut, through a community-academic partnership. *Health Education Research, 25*(5), 757–768.
- Singh, N. N., Lancioni, G. E., Winton, A. S. W., Karazsia, B. T., & Singh, J. (2013). Mindfulness training for teachers changes the behavior of their preschool students. *Research in Human Development, 10*(3), 211–233.
doi:10.1080/15427609.2013.818484
- Sprague, J., & Walker, H. (2000). Early identification and intervention for youth with antisocial and violent behavior. *Exceptional Children, 66*(3), 367–79.
- Stoolmiller, M., Eddy, J. M., & Reid, J. B. (2000). Detecting and describing preventive intervention effects in a universal school-based randomized trial targeting delinquent and violent behavior. *Journal of Consulting and Clinical Psychology, 68*(2), 296–306.
doi:10.1037/0022-006X.68.2.296
- Stough, L. (2006). The place of classroom management and standards in teacher education. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 909–923). New York, NY: Routledge.
- Sugai, G., & Horner, R., H. (2009). Defining and describing schoolwide positive behaviour support. In W. Sailor, G. Dunlap, G. Sugai, & R. Horner. (Eds.), *Handbook of positive behavior support* (pp. 307–326). New York, NY: Springer.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72*(2), 271–322. doi:10.1111/j.0022-3506.2004.00263.x

- Teper, R., Segal, Z. V., & Inzlicht, M. (2013). Inside the mindful mind: How mindfulness enhances emotion regulation through improvements in executive control. Retrieved from <http://rimmateper.com/s/Teper-Segal-Inzlicht-Inside-the-Mindful-Mind-in-press.pdf>
- Thompson, M., & Gauntlett-Gilbert, J. (2008). Mindfulness with children and adolescents: Effective clinical application. *Clinical Child Psychology & Psychiatry, 13*(3), 395–407.
- Tremblay, R. E. (2010). Developmental origins of disruptive behaviour problems: The “original sin” hypothesis, epigenetics and their consequences for prevention. *Journal of Child Psychology & Psychiatry, 51*(4), 341–367. doi:10.1111/j.1469-7610.2010.02211.x
- Tremblay, R. E., Vitaro, F., Gagnon, C., Piche, C., & Royer, N. (1992). A prosocial scale for the preschool behaviour questionnaire: Concurrent and predictive correlates. *International Journal of Behavioral Development, 15*(2), 227–45.
- Vanderheyden, A. M., Witt, J. C., & Gatti, S. (2001). Descriptive assessment method to reduce overall disruptive behavior in a preschool classroom. *School Psychology Review, 30*(4), 548–67.
- Volpe, R. J., DiPerna, J. C., Hintze, J. M., & Shapiro, E. S. (2005). Observing students in classroom settings: A review of seven coding schemes. *School Psychology Review, 34*(4), 454–474.
- Vuchinich, S., Bank, L., & Patterson, G. R. (1992). Parenting, peers, and the stability of antisocial behavior in preadolescent boys. *Developmental Psychology, 28*(3), 510–521. doi:10.1037/0012-1649.28.3.510

- Wang, P. (2011). Nature, nurture, and their interactions in child development and behavior. In R. G. Voigt, M. M. Macias & S. M. Myers (Eds.), *Developmental and behavioral pediatrics* (pp. 5–21). Elk Grove Village, IL: American Academy of Pediatrics.
- Ware, F., & Walsh-Tapiata, W. (2010). Youth development: Maori styles. *Youth Studies Australia*, 29(4), 18–29.
- Webster-Stratton, C., Reid, M. J., & Stoolmiller, M. (2008). Preventing conduct problems and improving school readiness: Evaluation of the incredible years teacher and child training programs in high-risk schools. *Journal of Child Psychology and Psychiatry*, 49(5), 471–488.
- Weissberg, R. P., Caplan, M., & Harwood, R. L. (1991). Promoting competent young people in competence-enhancing environments: A systems-based perspective on primary intervention. *Journal of Consulting & Clinical Psychology*, 59(6), 830-841.
- White, B., Jarrett, M., & Ollendick, T. (2013). Self-regulation deficits explain the link between reactive aggression and internalizing and externalizing behavior problems in children. *Journal of Psychopathology & Behavioral Assessment*, 35(1), 1–9.
doi:10.1007/s10862-012-9310-9
- Wilson, S. J., Lipsey, M. W., & Derzon, J. H. (2003). The effects of school-based intervention programs on aggressive behavior: A meta-analysis. *Journal of Consulting and Clinical Psychology*, 71(1), 136–149. doi:10.1037/0022-006X.71.1.136
- Woodfeld, M. (2011). When disaster strikes. Retrieved from
<http://www.ohbaby.co.nz/parenting/parenting/when-disaster-strikes/>
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. *Developmental Psychology*, 28(1), 126–136. doi:10.1037/0012-1649.28.1.126

Zucker, M., Spinazzola, J., Pollack, A. A., Pepe, L., Barry, S., Zhang, L., & Van der Kolk, B. (2010). Getting teachers in on the act: Evaluation of a theater- and classroom-based youth violence prevention program. *Journal of School Violence*, 9(2), 117–135.

Appendix 1: Educational Research Human Ethics Committee Approval



HUMAN ETHICS COMMITTEE

Secretary, Lynda Griffioen
Email: human-ethics@canterbury.ac.nz

Ref: 2013/45/ERHEC

24 July 2013

Tara Mueller
School of Health Sciences
UNIVERSITY OF CANTERBURY

Dear Tara

Thank you for providing the revised documents in support of your application to the Educational Research Human Ethics Committee. I am very pleased to inform you that your research proposal "The potential benefits of a combined conflict resolution-mindfulness training programme for primary school aged children" has been granted ethical approval.

Please note that this approval is subject to the incorporation of the amendments you have provided in your emails of 12 and 23 July 2013.

Should circumstances relevant to this current application change you are required to reapply for ethical approval.

If you have any questions regarding this approval, please let me know.

We wish you well for your research.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Nicola Surtees'.

Nicola Surtees
Chair
Educational Research Human Ethics Committee

"Please note that Ethical Approval and/or Clearance relates only to the ethical elements of the relationship between the researcher, research participants and other stakeholders. The granting of approval or clearance by the Ethical Clearance Committee should not be interpreted as comment on the methodology, legality, value or any other matters relating to this research."

E S

Appendix 2: Effect Size Calculations

Formula taken from Cumming (2012)

Positive Behaviour Scale Items

Standard Deviation pre: 4.4

Standard Deviation post: 3.1

Mean pre: 8.8

Mean post: 10.7

Mean difference: 1.9

Sav: average standard deviation

Calculation Step 1:

$$Sav = \sqrt{4.4^2 + 3.1^2} / 2$$

$$Sav = 3.8$$

Calculation Step 2:

$$d = \frac{1.9}{3.8}$$

$$d = 0.50$$

Behaviour Problems Index Items

Standard Deviation pre: 3

Standard Deviation post: 2

Mean pre: 2.3

Mean post: 1.2

Mean difference: -1.1

Sav: average standard deviation

Calculation Step 1:

$$Sav = \sqrt{2^2 + 3^2} / 2$$

$$Sav = 2.5$$

Calculation Step 2:

$$d = \frac{-1.1}{2.5}$$

$$d = 0.44$$

Appendix 3: Modified CR+M Intervention Session Plans

Skill	Session and Content
<p>Listen and Talk</p> <p><u>Week One</u> (Unit 1)</p>	<p>Session 1a.</p> <p>Introduction to the intervention and outline of session times/duration.</p> <p>Introduction of skill ‘Listen and Talk’.</p> <p>Guess the feeling game.</p> <p>Facilitator led role play with puppets: how to ‘Listen and Talk’.</p> <p>Session 1b.</p> <p>Guess the feeling game.</p> <p>Review of previous session.</p> <p>Group discussion: how to incorporate ‘Listen and Talk’ skills into situations when an individual is feeling grumpy, sad, angry or worried.</p> <p>Class led role play with facilitator using puppets to practice ‘Listen and Talk skills’.</p> <p>Reflection on role play and identification of kind, friendly, helpful and considerate strategies.</p> <p>Session 1c.</p> <p>Guess the feeling game.</p> <p>Group discussion: review of six concepts; how to listen, how to talk about feelings, how to be kind, how to be friendly, how to be helpful and how to show consideration. Also, how to implement ‘Listen and Talk’ skills in daily life.</p> <p>Class led role play with students using puppets to practice ‘Listen and Talk’ skills.</p> <p>Review of Unit One.</p>
<p>Stop, Sit, Think</p>	<p>Session 2a.</p> <p>Introduction of ‘Stop, Sit, Think’ skill.</p> <p>Facilitator led role play: ‘Stop, Sit, and Think’.</p>

Skill	Session and Content
<p><u>Week Two</u> (Unit 2)</p>	<p>Group skill practice and group discussion: identify and talk through components of each step for ‘Stop, Sit and Think’ skill.</p> <p>Session 2b. Class led role play using puppets: ‘Stop, Sit, and Think’. Small group activity: group role play; ‘Stop, Sit, and Think’.</p> <p>Session 2c. Class led role play using puppets: ‘Stop, Sit, and Think’. Group skill practice: practice steps for ‘Stop, Sit, Think’ together as a group. Group discussion: identify the 3 steps of ‘Stop, Sit, Think’, how to use ‘Stop, Sit, Think’ in daily life. Review of Unit Two.</p>
<p>Breathe <u>Week Three</u> (Unit 3)</p>	<p>Session 3a. Introduction to the development of self awareness and being present in the moment through focusing on the breathing process. Facilitator led role play of the three step breathing skill. Group skill practice:</p> <ul style="list-style-type: none"> a.) Three step breathing exercise. b.) Notice and listen to all surrounding sounds without making judgement on the experience. c.) Movement exercise; notice different sensations in the body while running on the spot. <p>Session 3b. Group discussion: What things have children in the group been aware of today? Review of concepts related to self awareness and being present in the moment. Group skill practice:</p> <ul style="list-style-type: none"> a.) Three step breathing exercise.

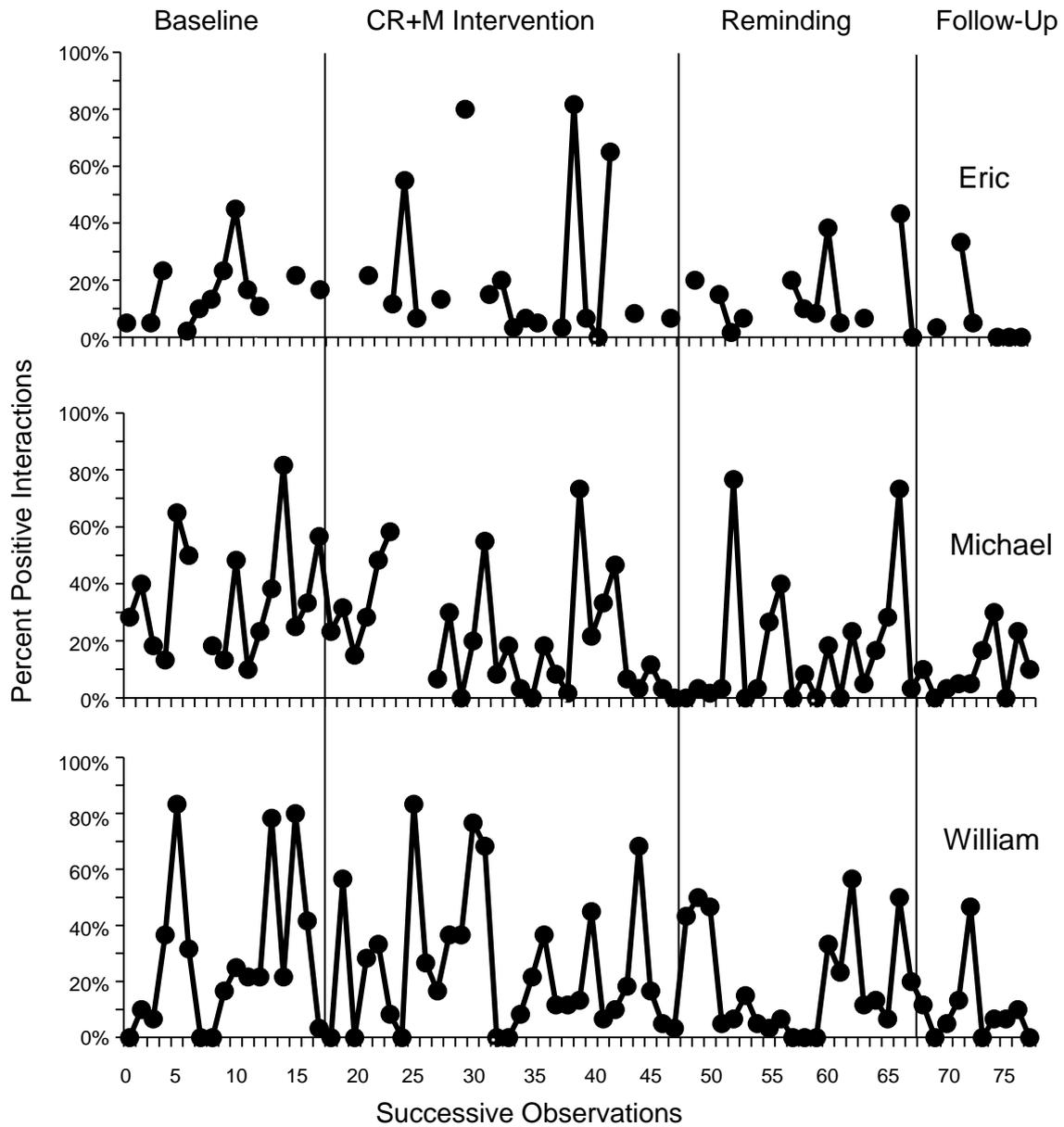
Skill	Session and Content
	<p>b.) Notice and listen to all surrounding sounds without making judgement on the experience.</p> <p>c.) Movement exercise: notice different sensations in the body while running on the spot.</p> <p>Session 3c.</p> <p>Group skill practice:</p> <p>a.) Three step breathing exercise.</p> <p>b.) Notice and listen to all surrounding sounds without making judgement on the experience.</p> <p>c.) Movement exercise: notice different sensations in the body while running on the spot.</p> <p>Review of Unit Three.</p>
<p>Notice Feelings</p> <p><u>Week Four</u> (Unit 4)</p>	<p>Session 4a.</p> <p>Introduction to ‘Notice Feelings’ skill.</p> <p>Group skill practice:</p> <p>a.) Three step breathing exercise.</p> <p>b.) Eating exercise: notice changes in different types of food; smell, texture and taste.</p> <p>c.) Notice Feelings; notice changes in feelings after listening to different pieces of music.</p> <p>Group discussion: identification of different feelings and the influence of music on feelings.</p> <p>Session 4b.</p> <p>Group skill practice:</p> <p>a.) Three step breathing exercise.</p> <p>b.) Eating exercise: notice changes in different types of food; smell, texture and taste.</p> <p>c.) Notice Feelings; notice changes in feelings after listening to different pieces of music.</p>

Skill	Session and Content
	<p>Session 4c.</p> <p>Group skill practice:</p> <ul style="list-style-type: none"> a.) Three step breathing exercise. b.) Eating exercise: notice changes in different types of food; smell, texture and taste. c.) Notice Feelings; notice changes in feelings after listening to different pieces of music. <p>Review of Unit Four:</p> <ul style="list-style-type: none"> a.) Breathing and focusing attention to develop self awareness. b.) Changes in feelings following an experience. <p>Intervention Review: review of the four intervention skills.</p> <p>Closing exercise: where to from here? How to use the four intervention skills in daily life to increase positive interactions with others.</p>

Appendix 4: Reminding Phase Review Session Content

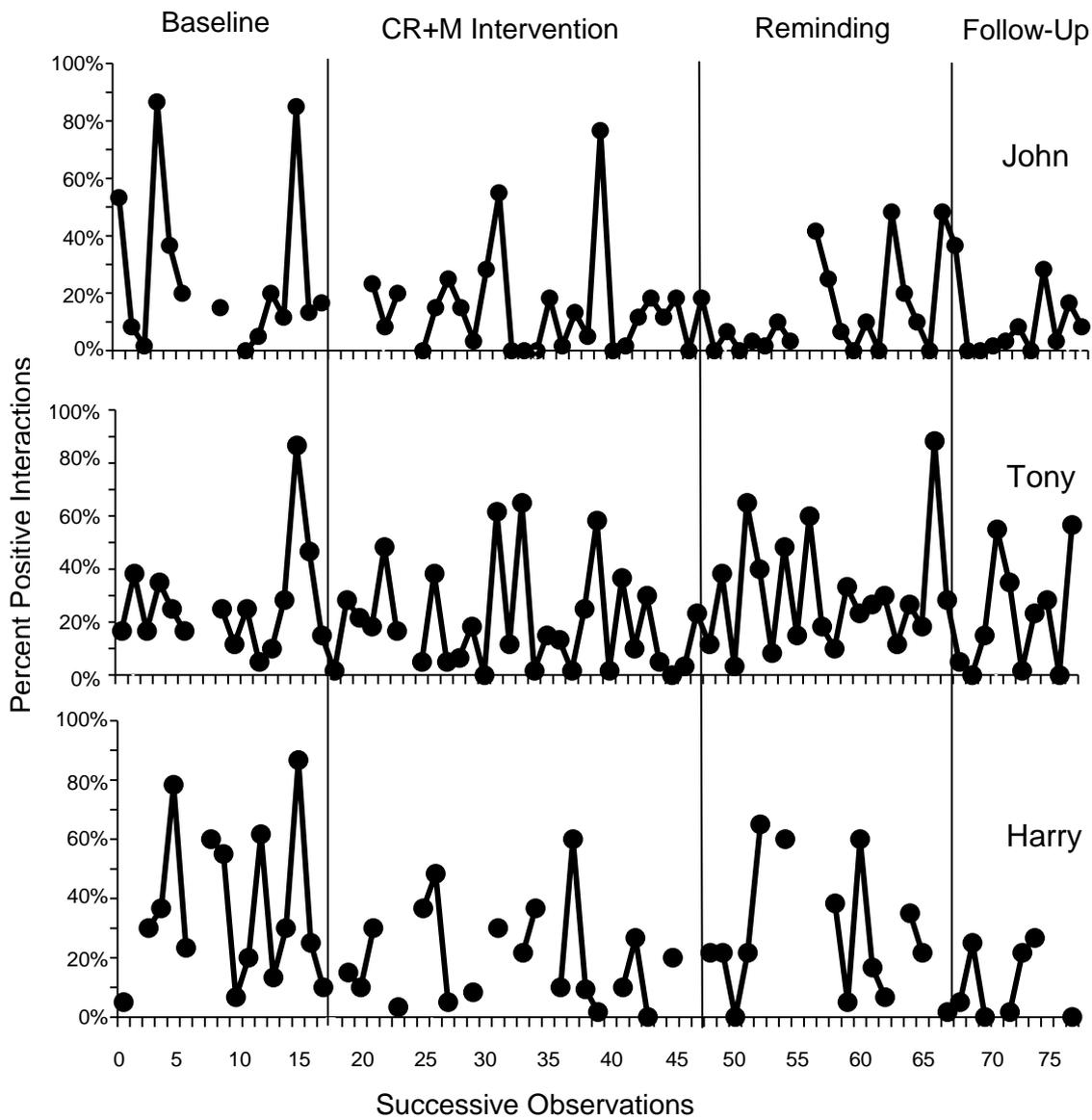
Review Session	Session Content
<p>1. Listen and Talk</p>	<p><u>Group discussion</u></p> <p>Review of ‘Listen and Talk’ puppet role plays.</p> <p>Review of steps involved when using the ‘Listen and Talk’ skill.</p>
<p>2. Stop, Sit and Think</p>	<p><u>Group discussion</u></p> <p>Review of each step involved in the ‘Stop, Sit, and Think’ skill.</p> <p>Review of the importance of stopping and thinking before acting.</p>
<p>3. Breathe & Focus Attention</p>	<p><u>Group discussion</u></p> <p>Review of the three step breathing technique.</p> <p><u>Skill practice</u></p> <ul style="list-style-type: none"> a.) All children participated in a short three step breathing exercise. b.) All children participated in a focusing attention exercise; listening to surrounding sounds for the duration of 1 minute.
<p>4. Notice Feelings</p>	<p><u>Group discussion</u></p> <p>Review of the mindful eating and mindful movement skills.</p> <p>Review of four intervention skills and integration of skills into daily life.</p> <p><u>Skill practice</u></p> <p>All children participated in a three step breathing exercise.</p>

Appendix 5: Preliminary Graphs



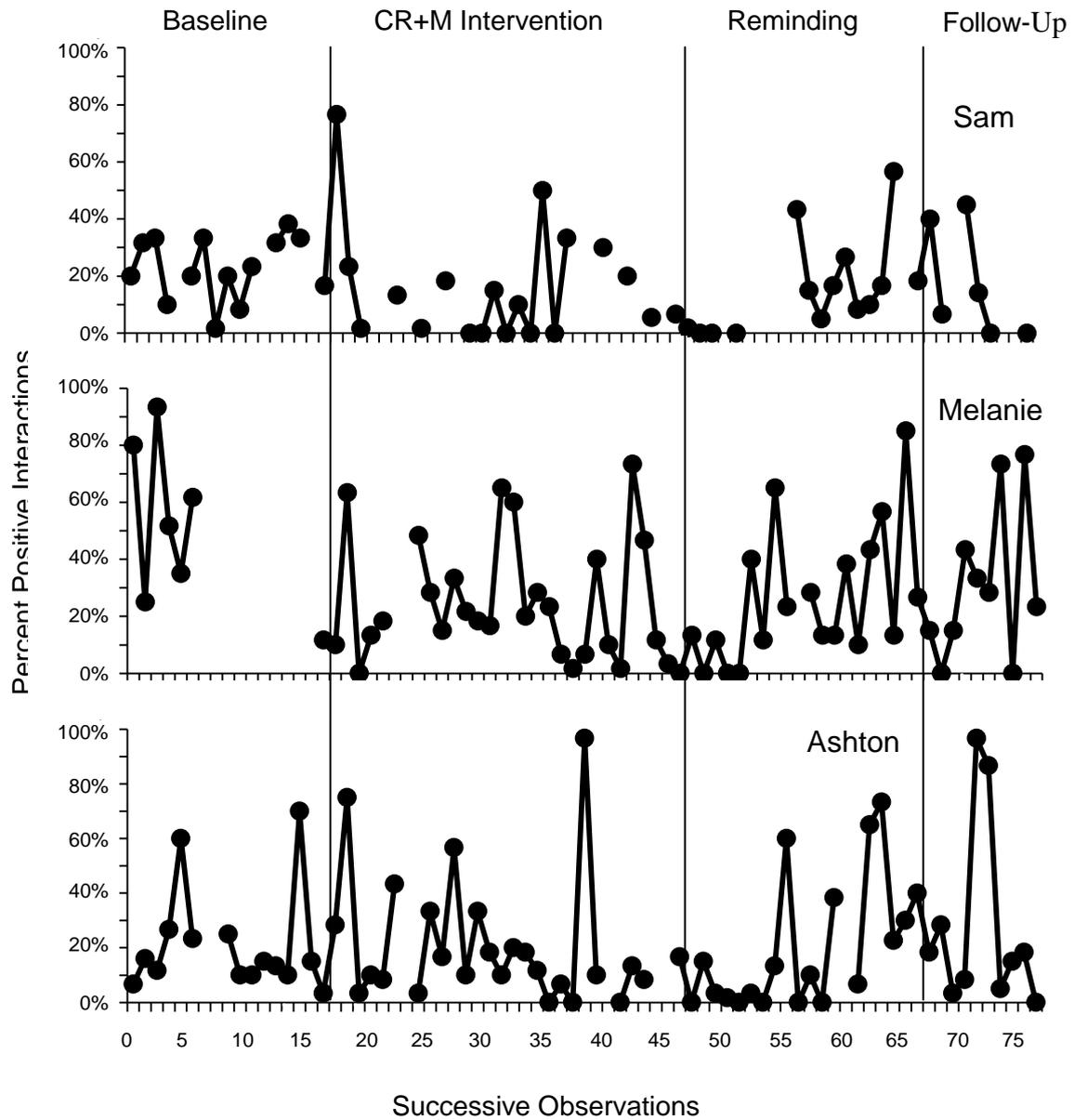
Percent of Intervals out of 60 with Positive Interaction with Peers for a Total of 77 Observations for Eric, Michael and William.

Appendix 5: Preliminary Graphs



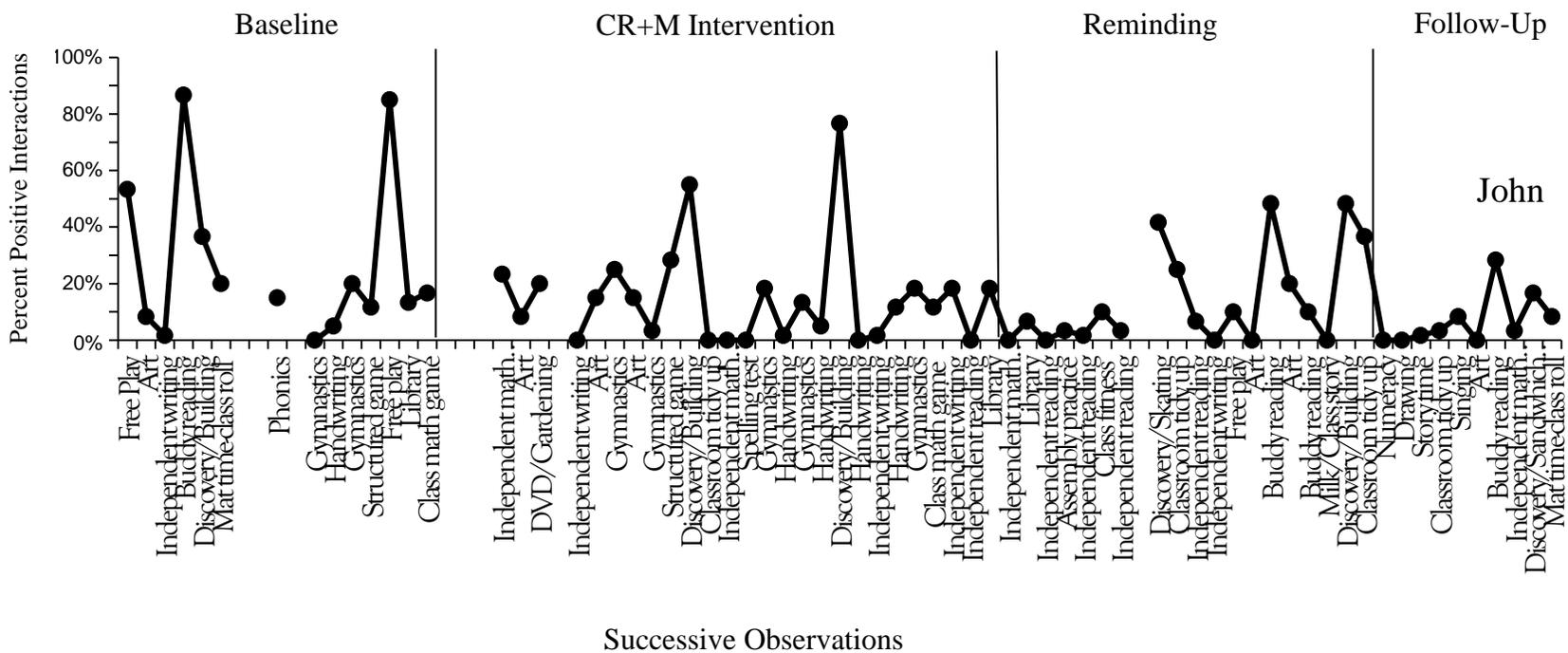
Percent of Intervals out of 60 with Positive Interaction with Peers for a Total of 77 Observations for John, Tony and Harry.

Appendix 5: Preliminary Graphs



Percent of Intervals out of 60 with Positive Interaction with Peers for a Total of 77 Observations for Sam, Melanie and Ashton.

Appendix 6: Preliminary Graph with Observation Setting



Percent of Intervals out of 60 with Positive Interaction with Peers for a Total of 77 Observations for John.

Note: Setting of each Observation Session is Specified.