School bullying has been universally recognised as damaging psychological, social, academic and even physical development of children (Marsh, Parada, Craven & Finger, 2004; Pellegrini, 2004). A well-designed anti-bully program that tackles school bullying is therefore an important mission for establishing desirable educational environments and positive pathways to self-reliance for children. The purpose of this paper is to review the extant anti-bullying research to identify salient features of successful interventions and identify directions for future research. Findings indicate effective intervention programs have some common features in that they: (1) are theoretical grounded; (2) gain commitment from the school and research team; (3) adopt a whole-school approach impacting on the school ethos, assisting teachers, informing parents and educating students; (4) use robust measures and analysis; (5) create safe and supportive school environments; (6) provide specialised formal teacher training showing teachers how to actively manage bullying behaviours; (7) use intervention strategies at individual and peer levels, as well as integrating cognitive-behavioural strategies to maintain long-term change; and (8) gain support from parents. Further, while some intervention programs considered in this review meet some of these criteria (e.g., Olweus, 1997; Rigby & Slee, 1993), their effectiveness has not been adequately determined by state-of-the art research methodology. To address the latter suggested strategies for strengthening anti-bullying intervention research are presented.

Effective anti-bullying intervention programs that are theoretically grounded, robustly designed and rigorously evaluated have been actively sought by primary and secondary schools around the world. In Australia, preventing school aggressive behaviour is congruent to the aims of the Australian National Crime Prevention Strategy (1999) to actively reduce crime in our schools. According to Rigby (1997), bullying within Australian schools is said to occur on a weekly basis for approximately 1 in 6 children. The detrimental long-term effects have been well documented in research on bullying and aggressive behaviour (e.g. Bernstein & Watson, 1997; Deater-Deckard, 2001; Nansel, et. al., 2001), and suggest, involvement in school bullying as a bully or a victim can contribute to peer rejection (Deater-Deckard, 2001), delinquent behaviour (Rigby & Cox, 1996), criminality (Eron, Huesman, Dubow, Romanoff, & Yarmel, 1987), psychological disturbance (Kumpulainen, Räsäen & Henttonen, 1999), further violence in the school (Galinsky & Salmond, 2002), depression (Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999), and suicidal ideation (Rigby & Slee, 1999). These effects have been found to continue into adulthood for both the perpetrators of bullying and those who are victimized by them (Olweus, 1993).

Whole-school approaches to prevent bullying have been advocated since the late 1980s (e.g. Lane, 1989) and although only marginal to moderate reductions in bullying have been experienced using a whole-school approach, a whole school approach to date, is considered the most effective means of decreasing bullying within schools (Salmivalli, 2001). It is not evident what aspects of the whole-school approach make some interventions more effective than others and what aspects hinder positive results. The aim of the present investigation is to review current anti-bullying evaluations, draw on salient features which hinder positive outcomes, and identify recommendations for future intervention.

School Bullying: What is it and Who Is Affected?

Bullying is a form of aggressive behaviour and has been described as “the systematic abuse of power” (Rigby, 2002). It is differentiated from other behaviours such as teasing and violence, and has 3 distinctive aspects. Bullying:

a. Is an intentional hurtful action directed toward another person or persons, by one or more persons (Sutton, Smith, & Swettenham, 1999);

b. Is repetitious in nature, where incidents occur more than once and are not random acts. This differentiates bullying from violence;

c. Involves an imbalance of power between the person bullying and the person being bullied. Within the bullying dynamic, victims are unable to defend themselves from the bully (Rigby, 2001). This is in contrast to the playful act of teasing which involves peer relationships that are equal and acts
which are intended to enhance the friendship between peers (Parada & Craven, 2002). Bullying however, is a mean action intended to hurt the victim and create subordination as well as a feeling of superiority for the bully.

Crick, et al. (2001), and Lowenstein (1977) argue that three forms of bullying and victimisation exist: physical, verbal, and social/relational. These three types can occur in the form of direct and indirect means and are congruent with the definition that the bully intentionally harms the victim, repeatedly, in order to feel superior within the social context.

**Review of Anti-Bullying Interventions**

A feature of all school anti-bullying interventions is that they are designed with promising intentions for improving peer relations among children at school. The following section of this paper reviews evaluations of anti-bullying interventions and elucidates the aspects which hinder positive outcomes. Table 1 is a summary of this review. However, the reason Table 1 includes only includes four studies is due to: (a) the difficult nature of obtaining evaluations on bullying interventions; (b) the inherent minute number of available studies based on whole-school bullying programs; and (c) the tendency for many evaluations not to report on important intervention aspects (i.e. measures, intervention specifics, school policy implementation). Table 1 is inclusive of only those journal articles which: use whole-school approaches; and where specific design details are satisfactorily explained. Although not in Table 1, findings from alternative whole-school evaluations (e.g. Roland, 2000; Smith & Sharp, 1994) where intervention aspects are not detailed or where results are published in books are referred to in this paper where appropriate.

In light of all whole-school approaches reviewed, the most common features of interventions that appear to contribute negatively to reductions in school bullying are:

1. The choice of psychometric evaluation for instrumentation and data analysis methods;
2. Inadequate implementation of the whole-school approach;
3. The need for researchers to solve ‘everything’; and
4. The lack of ongoing intervention.

**1) Psychometric Evaluation of Instrumentation and Data Analysis Methods**

While all instruments in Table 1 are widely used internationally, they have not been shown to be systematically or empirically robust. No researcher has provided an independent reliability or validity measure for instruments used, and most refer to previous findings by other researchers (e.g. Baldry & Farrington, 2004). These are popular instruments and are well documented yet their psychometric qualities are not well supported (e.g. Smith & Shu, 2000).

In an evaluation study of an anti-bullying program of 19 English schools, Smith and Shu (2000) gave 2308 students the popular Olweus Bully Inventory. The version used by Smith and Shu (2000) was an adapted version of the Olweus Inventory comprising 6 new items, however it was not indicated whether any items were taken out. Additionally, the scales for the items corresponding to bullying and being bullied were changed from the old version being bullied/bullying ‘in the past 3 months’ to the new version being bullied/bullying ‘since Christmas’ (which corresponded to a 6 month period). Analysis was carried out with reliability, validity or other psychometric evaluations of these new items and scale not given.

Furthermore, other problems evident in popular instruments relate to the use of: (a) single-item ‘global’ measures of bullying and victimisation (Peterson & Rigby, 1999; Stevens, De Bourdeaudhuij, & Van Oost, 2000); and (b) analysis by way of dichotomous variables (i.e. Menesini, Codecasa, Benelli & Cowie, 2003). Using single-item measures fail to tap into the three types of bullying and victimisation, and leads to large errors of variance; Dichotomisation on the other hand is the process of splitting variables and involves the inclusion of cut-off scores to create distinct groups. Dichotomisation in particular, when used on continuous and quantitative data, is an important concern because it can cause differences that existed before dichotomisation between variables to be considered as equal when dichotomised, it can lead to the reduction of effect sizes and statistical significance, as well as a distortion of effects (see MacCallum, Zhang, Preacher, & Rucker, 2002, for an extensive review on the problem of dichotomisation; Finger, Marsh, Craven and Parada, 2005, for a practical comparison of dichotomous and continuous methods using bullying data).
Table 1: Review of Anti-Bullying Intervention Evaluations

<table>
<thead>
<tr>
<th>Researcher and measures</th>
<th>Intervention and Theoretical Framework</th>
<th>Whole School Approach</th>
<th>Effectiveness</th>
<th>What happened</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baldry &amp; Farrington (2004)</td>
<td>● Intervention based on 3 aspects: bullying among peers, domestic violence, and the cycle of violence</td>
<td>Whole school approach, however no school ethos specified and no school policy implementation specified</td>
<td>No formal curriculum, however, intervention consisted of 3 group sessions (3 hours per session once a week for 3 weeks administered by first author plus assistant; 3 videos (1 for each session)</td>
<td>No formal support to help individuals involved in bullying stated</td>
</tr>
<tr>
<td>Menesini, Codecasa, Bendik, &amp; Cowie (2003)</td>
<td>● Measures: Self-report Italian version of Olweus Bully Inventory revised by Smith and Shu (2000). Single &amp; multi-item bully scale</td>
<td>Not stated</td>
<td>No formal curriculum.</td>
<td>No specific intervention outside individual peer support. Victims and supporters were had on-going class determined tasks and met once a week or once every 2 weeks with a trained teacher supervising</td>
</tr>
<tr>
<td>Stevens, Van Oost, &amp; De Bourdeaudhuil (2000)</td>
<td>● Measures: Self-report Olweus Bully Inventory (single item bully scale) and extra attitudinal behaviour measures.</td>
<td>Yes: “anti-bullying policy, indicating bullying behaviour will not be tolerated” (p24)</td>
<td>Curriculum-based intervention consisting of 4 group sessions (2x50min per session) administered by teachers; video included</td>
<td>Social Cognitive methods – perspective taking; problem-solving strategies; and social skills training</td>
</tr>
<tr>
<td>Peterson &amp; Rigby (1999)</td>
<td>● Measures: Self-report Peer Relations Questionnaire (Rigby &amp; Sloc, 1993), single item bully scale, 5-item victim scale</td>
<td>School policy and statement of rights developed by staff members, students and parents “Every person at [this] school has the right to experience positive and respectful relationships…” (p484)</td>
<td>Formal introduction of bullying into Personal/ Health and English/ Drama curriculum. No specific intervention length and type stated</td>
<td>No formal peer training stated (e.g. social cognitive approaches). A number of smaller initiatives i.e. peer helpers service, posters, class discussion and school-wide policy</td>
</tr>
<tr>
<td>Stevens, Van Oost, &amp; De Bourdeaudhuil (2000)</td>
<td>● Measures: Self-report Olweus Bully Inventory (single item bully scale) and extra attitudinal behaviour measures.</td>
<td>Whole class initiative.</td>
<td>No formal teacher training stated</td>
<td>Social cognitive methods – empathy and perspective taking</td>
</tr>
<tr>
<td>Peterson &amp; Rigby (1999)</td>
<td>● Measures: Self-report Peer Relations Questionnaire (Rigby &amp; Sloc, 1993), single item bully scale, 5-item victim scale</td>
<td>Whole class initiative.</td>
<td>No formal teacher training stated</td>
<td>Social cognitive methods – empathy and perspective taking</td>
</tr>
</tbody>
</table>

**Table Notes:**
- **Whole School Approach:**
  - **School Ethos:** Whole school approach, however no school ethos specified and no school policy implementation specified.
  - **Curriculum:** No formal curriculum.
  - **Teacher Training:** Formal teacher training was same as that for peer supporters.
  - **Peer Group Education:** Whole class initiative.
  - **Individual Intervention:** No specific intervention outside individual peer support.
  - **Parental Involvement:** Help offered for students directly involved in bullying (bullies and victims).

- **Effectiveness:**
  - **Primary Aged = generally no effect:**
  - **Secondary Aged = victimisation decreased for experimental group; slight decrease of bullying for experimental group whereas control group increased.**
  - **Marginal effects experienced:**
  - **More positive and significant effects for Secondary School Students:**
  - **Appears intervention or measures used were more relevant for older children.**

- **What happened:**
  - **Primary School generally no effect:**
  - **Secondary School = more negative attitude toward bully, positive attitude toward victim, & higher intervening behaviour in experimental group at 1st post-test; and**
  - **Positive results disappeared by 2nd post-test, and worsened:**
  - **Marginal effects were experienced:**
  - **More positive and significant effects for Secondary School Students:**
  - **Appears intervention or measures used were more relevant for older children.**
2) Implementation of the Whole-School Approach

Schools are the ideal environment in which to reduce bullying. Schools have the capacity to involve a large number of people and a variety of people from different levels of influence. For example, intervention to reduce bullying in schools can incorporate individual students, entire classes, teachers, head-teachers and family members. A whole-school approach to tackle bullying, as the name suggests, incorporates involvement from all those levels of influence within the school context (Stevens, Van Oost, & De Bourdeaudhuij, 2001).

However, as can be seen from the evaluations in Table 1, a whole-school approach has not been entirely implemented. All studies examined in this review were designed with the exclusion of one or more of the whole-school approaches (Baldry & Farrington, 2004; Menesini et al., 2003) or were implemented with the inclusion of one or more approaches that have not been developmentally appropriate for the particular intervening age group (Baldry & Farrington, 2004). This is common practice in anti-bullying research due to the inherent difficulty in implementing a thorough approach and where issues on the specific aspects are not clearly understood (Smith, Schneider, Smith, & Ananiadou, 2004). One method to overcome this is to examine the theoretical background (explained in more detail with recommendations) during the design process of an intervention, and decide on the important aspects according to the students’ age range. It is possible that the inclusion or exclusion of some factors important to particular age groups, for example the exclusion of parental involvement for primary aged children, may have lead to the only marginal positive effects of the whole-school approach experienced so far.

3) Solving ‘Everything’

There has been a recent tendency for some anti-bully research teams to want to solve a multitude of school issues (i.e. behaviour problems, academic motivation) during intervention for bullying (e.g. Roland, 2000), even when the processes of anti-bullying interventions are not yet clearly understood (Smith, Schneider, Smith, & Ananiadou, 2004). Izard (2002) believes interventions based on behaviour change only are limited because factors such as emotion and cognitive aspects are also important elements to children’s learning. Roland (2000) for example broadened the intervention scope in 3 separate whole-school interventions. He evaluated 2 of 3 whole-school approaches to tackling bullying in Norwegian schools where the first was conducted in 1983, the second in 1996 and the third was to begin in 2000 (the time of publication for this Roland paper). The development and changes between the 3 interventions over the years began specifically with a bully and intervention focus, and moved on to encompass a more preventative and comprehensive framework. It was the 1996 intervention that included a broader non-bully focused program, undertaken to examine whether this broad type of approach would prevent bullying, promote pro-social behaviour, and increase academic motivation. However, evaluations for this study were not given, even though the study was undertaken in 1996 and the paper was published in 2000. The only evaluative statement made for the 1996 study was that “the broad profile of the program and the material were well received by the schools, but the system of local assistance has to be improved” (p139). The third, 2000 intervention, was even broader and included greater academic components (i.e. reading and learning problems), making this an intervention concerned with behavioural as well as learning features. Because the third intervention began in 2000 when the Roland paper was published, no evaluation was available. Since then, no evaluation by Roland has been published for the 2000 intervention. Moreover, a 2004 publication by Galloway and Roland evaluated an intervention which was performed between 1992 and 1994, it was neither an altered 1996 nor a partial 2000 intervention.

While other school issues are important aspects of children’s peer social relations and academic life, there is a risk that the underlying aim specifically for decreasing bullying in schools, may be lost in the process. While pro-social behavioural training would achieve positive social results, and increasing academic motivation would lead to improved academic performance and learning, it is possible that reductions in bullying may not be the outcome if the focus is elsewhere. Further understanding would be achieved here when it is clear which intervention aspects achieve positive results and how added components affect the outcomes of existing intervention methods.

4) Ongoing Intervention

“Bullying is an ongoing problem, so a ‘one-off’ effort over a term or a year without continuation will have little or no lasting impact” (Smith, 2004, p101). Featuring in Table 1, no study has previously reported
follow-up or ongoing intervention. Furthermore, Stevens, Van Oost and De Bourdeaudhuij (2000) were the only researchers to report a second post-test evaluation, 1 year after the first post-test measures were achieved. In a randomised experimental evaluation of a whole-school anti-bullying intervention, they found students in the experimental condition held a more negative attitude toward bullies, a more positive attitude toward victims and higher intervening behaviour during bullying incidents at the first post-test. However, when the second post-test was carried out, Steven, Van Oost and De Bourdeaudhuij (2000) found not only did these positive outcomes disappear for the experimental group, but actually worsened. The positive outcomes found at the first post-test were not maintained 1 year later. This research highlights the importance of follow-up post-test measures and clearly illustrates the need for ongoing intervention. Bullying is an ongoing issue. A single effort to reduce bullying, in theory and practice, is an unrealistic expectation to tackle long-term school bullying and the vicious cycle it creates.

A commitment to the main aims of an anti-bullying project needs to be balanced and identified with additional processes which would aide in improving key goals of anti-bullying interventions, as opposed to transforming programs into alternatively focused interventions. It is important that these needs are made clear during the design phase of the intervention and that a commitment to bullying issues is resolved. Popular (e.g. Salmivalli, Lagerspetz, Björkqvist, Österman & Kaukiainen, 1996; Solberg & Olweus, 2003) but non-empirically supported analysis, instrumentation, methods of implementing a whole-school approach, a need to solve ‘everything’ and commitment to ongoing interventions are major concerns for anti-bullying researchers.

Creating the Most Effective Anti-Bullying Intervention: Recommendations

A variety of key issues are necessary for the effective implementation of a whole-school anti-bullying intervention. The following recommendations are aspects that require thorough consideration during intervention design phase for inclusion during ongoing intervention. These recommendations are illustrated in Figure 1. Figure 1 is based on the 'Beyond Bullying Secondary Program’ model by Parada & Craven (2002), and accommodates the following important intervention aspects. Interventions are: (a) theoretically grounded; (b) gain genuine commitment from the school and research team; (c) adopt a whole-school approach; (d) use empirically robust measures and methods of analysis; (e) create safe and supportive school environments; (f) provide specialised formal teacher training in classroom management, behaviour management, and adopting age-appropriate material during curriculum implementation; (g) educate peers and individual students according to roles within the dynamic of bullying; and (h) educate, enlist the support from and have parents actively involved in the program and actively involved with the child’s progression through the program.

Many of these recommendations fall under more than one heading and thus will be discussed in this paper under:

1) Theoretical backgrounds to bullying;
2) Genuine commitment from the research team and school;
3) Adopting a Whole-School Approach; and
4) Use of empirically robust instrumentation and methods of analysis.

Theoretical Backgrounds to Bullying

Bullying is no longer accepted as a social developmental process whereby children are subjected to socialisation by peer aggressive means (Meraviglia, Becker, Rosenbluth, Sanchez & Robertson, 2003). Bullying is a serious issue with significant negative consequences that continue into adulthood (Tatum, 1993). A whole-school approach to prevent bullying is usually made up of 1 or more of the following theoretical frameworks.

The School

A review of Japanese bullying literature by Yoneyama and Naito (2003) establishes that the school climate and the way teachers manage their classrooms are significantly responsible for the event of school bullying. They emphasise that schools are created as socialising and educating institutions which are based on hierarchical and authoritarian relations much like prisons and the defence forces. Yoneyama and Naito (2003) suggest the use of power-dominating relations, alienating modes of learning, high levels of rejection,
dehumanising methods of discipline and highly interventionist human relationships, all contribute to creating and maintaining bullying in the school environment. Although this review was based on studies from schools in Japan where bullying occurs more in the classroom than outside the classroom Yoneyama and Naito (2003) raise some important concerns regarding authoritarian relations which create hostile environments and these issues raised should be considered for intervention. In accordance with Yoneyama and Naito, the non-Japanese research team Roland and Galloway (2002) stress it is the work of classroom management and social structure together, that contribute significantly to school bullying and that these issues need to be addressed clearly within a whole-school approach for anti-bullying intervention to be effective.

Interventions that draw on key concepts of the school and classroom environment as a factor for bullying, focus on interventions that: change the school climate; and use effective teacher training programs designed specifically for anti-bullying intervention. In terms of the school climate, interventions should alter the school climate in two ways:

1) Establish a school-wide anti-bullying policy (Peterson & Rigby, 1999). School anti-bullying policy should be fostered school-wide and developed by head-teachers, teachers, students, and parents. The policy should be formally transformed into the school curriculum with student involvement during the curriculum transition is key; and
2) Create and provide a safe school environment (Wilson, 2004). Students have the right to feel safe and supported during attendance at school. Safe environments can be achieved by conducting building safety audits (Lake, 2004) that identify bully-prone zones and areas where adult monitoring is difficult. Safe environments constitute the inclusion of strong supervision and adult presence in these areas.

Concurrent with the school climate, effective teacher training should be provided. Teachers spend considerable amounts of direct contact with their students. They are responsible for the social structure of the class and possess a vital role in appropriately managing school bullying. Parada, Marsh and Craven (2003) suggest 5 target areas for how teachers can be better equipped to deal with bullying effectively:

1) Raising Awareness with students by teaching them about what bullying is as well as the consequences, that bullying is not cool, to use self-control strategies, resiliency skills and positive peer interaction skills;
2) Formally training teachers with classroom relationship management skills, being able to identify bullying and dealing with bullying effectively;
3) Encouraging students to build relationships by establishing expectations, modelling, paying attention to positive behaviours, giving students descriptive feedback, enhancing feedback, using corrective feedback and employing structured conversations;
4) Teaching them skills such as micro-techniques, maintaining focus, expectation discussion, redirection, shared control and referral to deal with bullying and misbehaviour;
5) Exercising personal coping strategies such as recognising negative teacher self-talk and cognitive-behavioural skills for emotional arousal.

Effective and formal teacher training with these key goals in attention, designed specifically for the anti-bullying intervention will create greater teacher-student harmony and improved interpersonal relations between peers.

Additional to effective classroom management and a positive school climate, it is crucial that students receive age-appropriate material (Dusenbury, Falco, Lake, Brannigan, & Bosworth, 1997). Shulman (1996) advises that intervention for younger children should include more visual aides and concrete type activities as they are predominantly visual learners, whereas older children should receive more discussion time, role-playing and perspective taking tasks which practice higher order abilities. Activities and curriculum that target attitude and behavioural change should be developmentally specific. Developmentally referring to cognitive, emotional, behavioural, academic, behavioural and social factors. Classroom based activities should allow students to discuss their views on bullying and educate them about the consequences of bullying from a victim centred perspective (Parada & Craven, 2002)

A school in which a positive school climate and classroom management are clear have school policies that are fair and consistent, pay attention to student safety, encourage academic achievement, and create positive peer and student-teacher relations (Wilson, 2004).
Figure 1: Whole-School Approach Model
Family Responsibility

The home environment, like the school environment may also foster aggressive styles that contribute to bullying. Studies which explore the nature of family and its relation to bullying tend to categorise participants which place them in bully, victim, bully/victim or non-involved groups (e.g. Connolly & Moore, 2003; Stevens, De Bourdeaudhuij, & Van Oost, 2002). In general, these studies tend to focus on perceptions of family functioning, parental styles and parent-child relations, usually from the child’s point of view. For example Connolly and Moore (2003) used the Family Relations Test to examine bully and control groups of 228 six to sixteen year olds perceived relations to their siblings, mother and father. Findings suggest those children classified as bullies ($n = 115$) tended to have a more ambivalent relationship with their family members whereas controls ($n = 113$) displayed positive relations with family members. Significant differences were found at the .05 level.

In a study reflecting child and parental perceptions of family functioning and child-rearing practices, Stevens, De Bourdeaudhuij and Van Oost (2002) found children who were classified as bullies, perceived significantly less family cohesiveness, expressiveness, organisation, control, social orientation and personal relationship, and more conflict in the family than children classified as victims, bully/victims and those not involved. No parental perception of family functioning was significant between parents of these classified groups, however, parents whose children were classified as bullies were found to be significantly higher on punishment compared to parents of other categories.

A fundamental difficulty of anti-bullying interventions, although particularly important for younger children, is transforming support from parents into parental involvement. While involvement can only be decided by the parent, the school does have influence on the probability of participation. If parents trust the school, they can trust that their involvement will make a difference in their child’s life. School bullying intervention may gain by offering a general ‘Parent Training’ course. In an effort to quieten the general assumption that “parents who have mental health risk factors or who live in stressful life situations” will not attend or benefit from parent training, Baydar, Reid and Webster-Stratton (2003) randomly assigned some Head Start centres to 12 session (4 months) parent programs (teaching parents child-directed play, positive discipline, effective parenting, coping with stress and strengthening children’s social skills) for pre-school children and some to the control condition who were not given this program. Parental report and independent observational methods measured 3 domains: harsh/ negative; supportive/ positive; and inconsistent/ ineffective parenting. Conducting structural equation modelling, findings show that for mothers who were more harsh, less supportive and less consistent with their children did attend parenting classes and did have improved parenting skills at the end of the program. Factors that facilitated involvement was through providing parents with child care, transportation and meals which “helped remove many of the logical barriers to attendance that disadvantaged parents often experience” (Baydar, Reid & Webster-Stratton, 2003, p1451) and further propose that effective involvement from parents was due to training being offered in a supportive and accessible way. Additionally, Spatz Widow (1998) proposes that widespread parent training may alleviate common misconceptions and the negative association of such programs. Although this may not apply to large educational settings, and could be expensive, parent training and involvement deserves important consideration.

The amount of family involvement with school anti-bullying interventions should differ according to the intensity of influence the family has for children on different developmental levels. Intervention with the family may be more meaningful for children who are still highly influenced by their parents. Families tend to be more involved in the lives of younger children (particularly Primary School and younger as opposed to teenage children) and thus it may be more meaningful for greater parental participation when children are young. In relation to the family, Elias et al. (2002) compiled a table to reflect the differing family influence for different developmental stages in children. They suggest that lower/middle primary aged children begin to internalise values of the family and develop an understanding of different family structures. They further propose that upper primary aged children value family rituals, and begin to recognise tension between the values of their parents and the values of their friends. In relation to adolescents, Elias et al. (2002) suggest these children are becoming independent from their family and may be preparing for family/ parenting responsibility of their own. The diverse range of parental influence on school bullying should allow a diverse range of parental involvement in anti-bullying interventions for children of different ages. In particular, primary aged children where the influence of the family is greater than the influence of the social system should include intensive family involvement whereas high school interventions may need to target peers more so than parents with adolescents.
In terms of effective family involvement intervention should consider:

1) The direct or indirect involvement of parents. Direct education may include parent-teacher nights etc whereas indirect means can be accomplished by raising awareness using pamphlets, newsletters and take-home material. Education should provide information on what is bullying, the causes, the consequences, the need for whole-school policy to address bullying, and how to contact the school if their child is involved in bullying (Parada and Craven, 2002);

2) Gaining support from parents. This requires positive school-parent and teacher-parent relations. Support can be initially gained using consent forms for children’s participation in the program and can carry on to include support of their child and support for the school. Parental support does not stop at the school. It is crucial that parents also be aware and give their child appropriate support in dealing with bullying. Parents have the ability to effectively help manage their children control anti-social behaviours, help their children perceive bullying as inappropriate, help their children acquire positive peer interactions skills and encourage their children to assist the school in addressing bullying (Parada & Craven, 2002);

Parental involvement is one of the most difficult elements of interventions to tackle bullying. However, the importance of parental involvement, especially for younger children, should be a key goal for interventions which foster a valuable whole-school approach.

Social Influences

Bullying occurs in a social environment and is often met with enjoyment not only by the perpetrator, but also by the peers (Salmivalli, et. al., 1996). Observational data analysed by Atlas and Pepler (1998) found that 85% of bullying incidents occur with the involvement of peers. Peers can either be actively involved or passively aware of the bullying process, and have the capacity to encourage bullying, ignore the bullying incident, help the victim or fail to discourage the bullying behaviours. According to Bandura (1973), behaviour will be continued, mimicked or modelled if reinforced, or at least behaviour that escapes punishment. It is for this reason that students who bully other students, or who witness bullying, may believe this behaviour is acceptable due to the positive reinforcement and/ or escaping of punishment for the behaviour within the peer group. Parada and Craven (2002) further suggest bullies may continue bullying, or others may begin bullying, in an attempt to gain further reinforcement or non-punishment from their peers.

Peers do not only play an important role in creating bullying situations, but may also play an important role in protecting victims (Hodges, Boivin, Vitaro, & Bukowski, 1999; Schwartz, Dodge, Pettit, & Bates, 2000). Buhs and Ladd (2001), examined the relation of peer mediation on peer rejection, child emotion and academic adjustment. Using a cohort of 399 Kindergarten children results suggested rejected children were “more likely to experience negative peer treatment, more likely to show decreases in classroom participation, and more likely to report loneliness” (p550). Hence peer mediation and befriending activities may be useful to include in intervention.

In an evaluation of a befriending intervention, Menesini, et. al., (2003) introduced a whole-class initiative where victims were paired with trained peer supporters (befrienders of the victim). Peer supporters were trained in listening and communication skills. Once paired, classes determined the tasks for the victims and supporters who met once a week or once every 2 weeks with a trained teacher supervising. Peer supporters were trained to teach non-trained classmates in helping roles and how to become a supporter. Marginal positive effects were experienced by those groups who had supporters. It appears that the positive peer relations (possibly coupled with the teacher supervision) contributed to these effects. In another evaluation of anti-bullying intervention, Peterson and Rigby (1999) found the largest effect their anti-bullying intervention had, was for Year 7 students. The effect involved a decline in victimisation. However a Peer Support Program was introduced to Year 7 students at the same time the whole-school intervention was implemented. It appears that the decrease in victimisation was due to the prominent feature of the Peer Support system as opposed to the anti-bullying intervention, or perhaps the inclusion of both helped Year 7 students fair better with victimisation.

It is possible that interventions focused on the social environment may be more appropriate for children who clearly understand their role and the role of others within the peer group. Selman (1980) argues that two factors contribute to healthy interpersonal relationships. The first, having an awareness of own thoughts, and the second, being aware of other points of view. He further proposes that this social awareness develops over time. Elias et al. (2002) accordingly suggest children who are lower to middle primary school aged, are at a stage where they are developing their understanding of being in a group, have a developing sense of helping, are able to compromise, able to initiate interactions with others, are learning friend-making skills and are developing the ability to include and exclude others. Upper primary aged children on the other hand, they
argue (2002) are further able to deal with conflict and have an important need to belong. This need to belong in a peer group is particularly salient for bullying and offers a worthy explanation why the effects of bullying can be so traumatic and long-lasting for children at and after this age. Furthermore, Elias et al. (2002) suggest adolescents are able to use effective behaviour in the peer group and have responsible group membership. Intervention should thus, include more role-playing, discussion and peer activities the older the child is.

Students have the capacity to learn new reinforcement behaviours in place of encouraging, ignoring or failing to discourage the behaviour. Peer group training, discussion and role-playing help students understand and learn from their role as a reinforcer to bullying and can manage ways to positively reinforce peers who attempt to stop bullying (Stevens, Van Oost, et al., 2000), reinforce pro-social behaviour, reinforce inappropriate behaviour and support the victim.

Students are responsible for preventing bullying in two key ways. The first being the influence they have on bullying as members of the peer group and the second being able to control their own behaviour. The influence of the student in the peer group should be clearly explained and understood by the student for the student to effectively reduce bullying. Intervention with the peer group focuses on creating and maintaining positive peer relations. This can be achieved by teaching children to learn situational responses, to reinforce peer behaviour and to use social-cognition or cognitive-behavioural skills. “Teaching people to anticipate high-risk situations successfully prevents relapse of the risk behaviour” (Stevens, Van Oost, et al., 2000, p31). Teaching students to anticipate situational circumstances in which bullying may occur (i.e. jealousy, low-supervised area) can help students deal with peer social pressure (Stevens, Van Oost, et al., 2000) and help students effectively practice alternative methods to deal effectively with bullying such as using help seeking skills.

Social-cognitive training may come in the form of perspective-taking, social skills training, problem solving skills and empathy. This training can aide intervention success by increasing pro-social behaviour. However, as noted earlier in the review, this can be problematic when too many processes are taught in bid to solve a myriad of school issues. A commitment to the main aims of an anti-bullying project needs to be balanced and identified with additional processes that would aide in improving the key goals of reducing bullying.

**Individual Characteristics**

While the peer group is largely responsible for bullying, the individual is not exempt from learning to control their behaviour. Research examining personality factors of bullies have found evidence for bullies to be narcissistic (Connolly & Moore, 2003); have more diagnoses of conduct disorder, oppositional defiant disorder, attention-deficit/ hyperactivity disorder, and depressive disorder (Coolidge, BenBoer & Segal, 2004). Bullies and victims also tend to have higher emotional instability and lower friendliness scores (Tani, Greenman, Schneider, & Fregoso, 2003); and victims exhibit lower self-regard (Egan & Perry, 1998). An individual-focused approach employed more frequently to understand school bullying is self-concept. Self-concept has been recognised as an important component of bullying and victimisation (e.g. Johnson & Lewis, 1999; Randall, 1996). Hinkley, Marsh, Craven, McNerney, and Parada (2002) state that an individual’s social identity is an “integral and important” part of that person’s self-concept. According to the Social Interaction Model, a subset of Social Identity Theory, individuals categorise themselves into certain groups to which they belong, giving them the opportunity to compare their group and themselves to other groups and other individuals at the school. This enables individuals to discern their own positions within the social hierarchy (Parada & Craven, 2002). If bullying is positively reinforced by the peer group and perceived by individuals to improve their position in the social hierarchy of the school, categorisation of oneself into a group that is of high status and exclusive, is likely to enhance one’s sense of popularity. It seems logical then to consider peer reinforcement of bullying behaviours, and the influence of the social group as having an effect and being related to an individual’s self-concept (Parada & Craven, 2002). Furthermore, individuals who witness bullying may perceive the high social pay-offs for bullying and may mimic this behaviour for personal gains in social standing and power within the school social system (Parada & Craven, 2002). They may expect positive social outcomes, which may thus lead them to feel good about themselves and perceive themselves to be quite popular, increasing their self-concept and perception of themselves. This is supported by studies such as those of Crick and Dodge (1994) who state that desirable outcomes of aggressive behaviour are expected by those who tend to use aggressive means.

Parada and Craven (2002) advocate individuals involved in bullying should gain specific help with peer relational difficulties. They suggest this can be achieved by developing ‘behavioural contracts’ and behavioural and emotional control training with the students involved. Educating students about their
individual role and influence is an important attribute to anti-bullying intervention. Bullies should be shown the consequences of their actions and create an identification with victim self-control strategies. Targets of bullying should be trained in target avoidance, resilience and seeking assistance. Bystanders further should be taught to reinforce zero tolerance and the importance of reporting bullying. Interventions look to enhance self-concept by teaching students positive social skills that enhance their worth in the peer group and enhance their ability to control their behaviour.

Enhancing self-concept has continually been a goal for schools internationally. Activities which enhance positive and realistic self-concept goals, which teach children to control their own behaviour and which teach others how to effectively reinforce desirable and non-desirable behaviour, should be included in intervention to help reduce bullying in schools.

Theoretically, due to the complex interaction and multiple causes of bullying, there are potentially multiple methods of intervention (Smith, Schneider, Smith & Ananiadou, 2004) and possibly those that are interrelated. Basing intervention on the inclusion of only 1 theoretical framework, limits a schools capacity to effectively deal with bullying. It is not just a matter of the more the better, but a matter of emphasis placed on each theoretical foundation pertaining to particular age groups. A whole-school approach based on a variety of these theories, appropriate for different developmental age groups (developmental referring to cognitive, academic, emotional, behavioural, and social factors), is expected to be more successful in reducing and preventing bullying within the school.

### Genuine Commitment From the Research Team and School

“Arguably, the most important factor (for the whole-school approach) is the extent to which schools take ownership of the anti-bullying work, whatever form it takes, and push it forward effectively and persistently” (Smith, 2004, p. 101).

Although the school plays an important role in effectively implementing an intervention, ineffectiveness of anti-bullying interventions has previously been attributed to the research team (Roland, 2000; Smith & Sharp, 1994). Smith and Sharp (1994) for example, evaluated 27 English schools participating in the Sheffield Project, a whole-school anti-bullying intervention. They concluded that those schools with greater support from the research team fared better than those with minimal support. Although plausible, the lack of consistency in administration and evaluation of the Sheffield Project made it difficult to reliably support the conclusion that the research team played a significant role in contributing solely to the marginal positive results. Furthermore, an experimental study by Stevens, De Bourdeaudhuij and Van Oost (2000) analyzing schools with: (a) additional support; (b) no additional support; and (c) no intervention, found that extra support revealed no significant effects for bullying and victimization. Although a specified support system would improve outcomes, further empirical evidence is needed.

Initial eagerness by the research team without commitment from the school, or conversely, having an enthusiastic school without the support from the research team raise serious issues before the intervention has even begun. Commitment from both the school (Rigby, 2002) and a clear support system from the research team (Roland, 2000), working together, is required to ensure the smooth implementation of the intervention.

### Adopting a Whole-School Approach

Schools are the ideal environment in which to reduce bullying. A whole-school intervention approach uses all aspects of the school environment (school ethos, school climate, teachers, parents and students) to counteract school bullying. Clayton, Ballif-Spanvillee and Hunsaker (2001), established 3 rationales for implementing interventions within a school context. A whole-school approach is able to:

1) Access the largest number of children for any given period. This is further enhanced by the early ages at which intervention can reach as well as the ability to target groups over an extended period of time;

2) Access widespread intervention to include all types of children (i.e. those who use aggressive and those who use non-aggressive means); and

3) Accomplish change in the child’s environment. This leads to greater productive change in children’s behaviour.
Baldry (2003) postulates that schools are equipped to provide a supportive environment that helps children manage their behaviour as well as learn new behaviours during peer interaction. Moreover, a whole-school approach can also be expanded to involve the community, e.g. funding, participation, interest, and local media awareness during intervention.

An effective whole-school anti-bullying approach creates a school-wide anti-bullying policy and educates teachers, peers, individuals and parents on all aspects of bullying. Here the role and influence of each should be made explicit. As noted in the review of anti-bullying evaluations, it is difficult to effectively implement some aspects of the whole-school approach, e.g. parental involvement. Previous interventions have often excluded one or more vital aspects (e.g. parental involvement for Primary aged children) that may contribute to the marginal or non-significant reductions in bullying and victimisation. Although the specific characteristics of the whole-school approach are not well understood, the whole-school approach is still the most effective means of combating bullying (Salmivalli, 2001).

A multitude of contributors to bullying exist. All need to be dealt with together, not in isolation, and together they will have a greater effectiveness than any alone. There is no greater opportunity than the school environment to accomplish this integration.

Use of Empirically Robust Instrumentation and Methods of Analysis

Popular instrumentation and methods of analysis in school bullying research are riddled with psychometric and evaluative concerns (refer to overview in ‘Review of Anti-bullying Interventions’). Overcoming these problems include:

a) Using multi-item instrumentation that measure all three types of bullying and victimisation according to behavioural properties, i.e. to measure Physical Bullying items should include a range of behaviours like pushed or shoved a student; hit or kicked a student hard; crashed into a student on purpose as they walked by; got into a physical fight with a student because I didn’t like them; threw something at a student to hit them; and threatened to physically hurt or harm a student (Parada, 2000).

b) Avoiding categorisation methods of analysis that present a child as a bully, victim, non-involved etc. It must be clear, during intervention as well as during analysis, that it is not the child who is unacceptable but it is the behaviour that is unacceptable; and

c) Establishing a clear anti-bullying design that measures the intended aspects of bullying and victimisation specifically for the age range intended.

Bridging the gap between these concerns is not an easy task. An established and committed research team that are dedicated to the main goals of effective instrumentation are key.

Conclusion

To date, no miracle cure, or distinctive characteristic prominently fairs as the winning tool for anti-bullying intervention. It appears that an integrative approach of all whole-school processes would lead to the most productive outcomes, coupled with ongoing education. A number of possible intervention angles are thus required. The school particularly possesses the best opportunity for this integrative effect to occur, having the ability to access a large amount of people from different backgrounds.

It is those schools which have begun with a strong and genuine commitment from the school and research team that appear to fair the best (Smith, 2004; Roland, 2000). Perhaps this is the magic ingredient. Without the schools genuine commitment, then the school cannot expect students to accept the preceding intervention. However, at this stage, further evidence to support this is needed.

Another important factor that may contribute to positive outcomes include structuring the intervention according to the particular age of the students. Crucial considerations include stronger parental involvement for Primary aged children and greater peer intervention for adolescents; as well as more visual stimuli for younger children and increasing discussion type activities for older children. These aspects relate to developmental issues of students at different ages and are important issues concerning the direction intervention should adopt during the design phase. Gaining and maintaining student attention is essential for encouraging students to be involved and become committed. The primary influential aspect to reducing bullying is with the students. Without their involvement the intervention, no matter how well structured, is designed to fail.
Finally, an additional and just as important feature but which has not received the significance it deserves, is the need for continual intervention. “Bullying is an ongoing problem, so a ‘one-off’ effort over a term or a year without continuation will have little or no lasting impact” (Smith, 2004, p101). Time is crucial and has been lacking with previous anti-bullying interventions that have endured marginal success. Bullying, as Smith states, is an ongoing problem. This applies particularly for older children where bullying has been developing over a number of years. It is not realistic to consider a single effort to reduce bullying will have long lasting effects. Continual commitment from the school to recurrently implement the program after initial completion gives schools the chance to maintain long-term improvements. With continual dedication, this school commitment can become part of the school norm.

It is important to note that the Figure 1 model is a recommended format for successful whole-school implementation. An integrative approach which includes all these aspects and which is ongoing is more likely to produce greater and longer lasting positive results. Interventions can and do make a difference. Although only marginal improvements have been made so far, continual research and evaluation are necessary for continual improvement for school anti-bullying interventions.

About the Authors

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