Schoolyard Bullying: An Examination of Individual Differences in Thoughts, Feelings, and Behaviours in Adolescents and Young Adults

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Psychology

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DECLARATION OF AUTHORSHIP

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in the whole or in part, to qualify for any other academic award; the content of the thesis is the result of work that has been carried out since the official commencement date of the approved research program; any editorial work, paid or unpaid, carried out by a third party is acknowledged; and ethics procedures and guidelines have been followed.

Signed

Geraldine Abdilla

Date
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This research examines bullying from a socio-information processing approach within a socio-ecological framework in order to examine the association between bullying and a broad variety of socio-ecological contexts. A primary focus of this research is the role of cognitive distortions in influencing emotional experiences as they relate to behaviour, including interactions with others such as bullying and victimisation. This focus is driven by the literature on Rational Emotive Therapy (see Bernard, Ellis, & Terjesen, 2006) as well as the seminal work of Meichenbaum (Meichenbaum, 1977). It must be recognised however, that the relationship between thoughts, feelings, and behaviours is not necessarily a linear or sequential one - at least when viewed from a ‘conscious’ mind perspective. Indeed, conscious awareness of a change in physiological state (e.g., heart rate elevations) rather than a specific, conscious thought may be the first indicator of anxiety or anger within an individual. Thus, the relationship is a multidirectional one, where one’s emotional state can influence one’s thoughts, and one’s behaviours (and the consequences of those behaviours) can also influence one’s thoughts and feelings. In addition, apart from thoughts, there are an infinite number of other factors that can influence emotion and behaviour, which can include intrinsic factors such as biology, physiology, and genetics, to factors more proximal, such as social-information processing biases, social skills, and modelling to name a few. Thus, given the vast range of possible permutations of these factors, combined with the unique set of social experiences of a particular individual, understanding how any given child will respond to or be affected by a particular experience is a challenging task. However, by examining parallels among the internalised heuristics that may have developed through the unique configuration of these factors, it is anticipated that researchers and clinicians might begin to understand what children are bringing with them into social situations that
contribute to the establishment and maintenance of bully and victim behaviour. The rationale behind examining a wide range of factors that influence bullying and victim behaviour is driven by the recognition that although there is a link between bullying/victimisation, self-serving (aggressive)/self-debasing (depressive) cognitions, and poor psychosocial functioning, these are separated in the wider body of literature on bullying, and therefore this thesis aims to examine the links more wholistically by integrating information obtained at the behavioural (bullying/victimisation), cognitive (distortions), and emotional (measures of psychosocial function, such as depression and anxiety) levels, and using this information in a meditational analysis. To the author’s knowledge, no such study has integrated all three components to investigate bullying, and in this way is of significance because it may lead to a better understanding of the components necessary to intervene in bullying and the corresponding psychosocial sequelae.

Given that research indicates that aggressive individuals, including children and adolescents, generally tend to hold beliefs that aggression will lead to favourable outcomes, reduce negative treatment by others (Perry et al., 1986), increase self-esteem, help to avoid a negative image, not lead to suffering by the victim and believe that aggression is a legitimate response to perceived provocation (Slaby & Guerra, 1998), it appears plausible to suggest that for aggressors, such as bullies, self-serving cognitive distortions play a critical role in the expression/regulation of bullying behaviours. Bullying, in turn, has been equivocally linked to a variety of psychosocial variables, including anger, depression, anxiety, self-esteem, locus of control, coping styles, school connectedness, and attachment.

For victims, a similar framework can be applied. Prospective studies have demonstrated that victimisation is more likely to lead to depression and anxiety than the reverse causal direction (Bond et al., 2001; Gladstone, Parker, & Mahli, 2006).
Furthermore, the link between victimisation and other problems in psychosocial functioning, such as in self-esteem, school connectedness, attachment, coping, locus of control, and anger, have generally been well-established. In turn, negative automatic thoughts and cognitive vulnerabilities to depression have been found to be associated with depression, anxiety, and self-esteem in victims of bullying (Graham & Juvonen, 2002; Grills & Ollendick, 2002; Marton & Kutcher, 1995; Leung & Poon, 2001; Marton, Churchard, & Kutcher, 1993; Tems, Stewart, Skinner, Hughes, & Emslie, 1993).

However, the process by which victimisation leads to these common outcomes of victimisation is a largely under-researched area. One possible way is through self-debasing cognitive distortion. As the bullying continues, the negative views and behaviours of peers towards the victim may gradually become internalised by the victim, and any lack of self-defence may be interpreted as weakness, which further serves to consolidate a negative view of oneself, and possibly the world and future (cognitive triad), leading to depressive symptoms, including lowered self-esteem, as well as anticipatory anxiety of future attacks. These outcomes may also have distal effects such as on one’s sense of locus of control, anger, school connectedness, attachment to peers and parents, and coping styles. Hence, it is hypothesised that self-debasing cognitive distortions consisting themes of personal failure and social/physical threat will mediate the association between victimisation and depression, anxiety, and self-esteem.

However, the effect on self-debasing cognitive distortions on victims’ attachment, coping styles, locus of control, school connectedness, and anger will also be examined.

An equally important investigation this study aims to undertake is exploration of the accuracy with which participants in the bully/victim cycle are able to self-identify their status, by comparing their perceived status to formal status derived from responses to a well-established and well-known bullying questionnaire. The ability to self-identify one’s status sheds light on the types of experiences that adolescents and young adults
consider to constitute bullying which, in turn, holds important implications for their potential engagement with anti-bullying interventions. This study also aims to extend the focus of research into adolescent bullying behaviour by including the domain of cyber bullying. Research on cyber bullying has steadily increased over the last five years, and this early research has predominantly focused on prevalence rates (including types of cyber bullying perpetrated), demographics of those involved, and only general feelings and reactions towards being cybervictimised. By way of expansion, the present research examines specifically the role of cognitive distortions in the relationship between involvement in cyber bullying (as either bully, victim, or bully/victim) and psychosocial functioning. Moreover, although it is known that a substantial proportion of students involved in real-world bullying are also involved in cyber bullying, none of the extant research has explored the psychosocial profile of those involved in dual modalities of bullying as compared to those involved in a single modality of bullying. Therefore, this thesis also aims to advance our knowledge and understanding of bully-victim behaviour examining differences between individuals involved in real-world and/or in cyber bullying.

In addition, since males and females have been shown to be involved in different forms of victimisation/perpetration, and that this may be related to differences in psychosocial functioning, the role of gender will be explored as a moderator of the relationship between bullying/victimisation and psychosocial functioning.

The current research is considered to be groundbreaking in the sense that previous research has not examined different types of cognitive distortions and their role in influencing psychosocial functioning in the context of bullying (both traditional and cyber bullying). Therefore, a series of research questions were explored, rather than specific hypotheses, which require a priori knowledge to generate validly. The program of research reported in this thesis addresses a range of issues that can be summarised into 10 research specific questions as listed below.
1. How accurately do students perceive their status within the bully/victim cycle?

2. Do bullies, victims, bully/victims, and non-involved students differ on externalising cognitive distortions?

3. Do bullies, victims, bully/victims, and non-involved students differ on internalising cognitive distortions?

4. Do self-serving cognitive distortions mediate the relationship between bullying and psychosocial variables?

5. Do self-debasing cognitive distortions mediate the relationship between victimisation and psychosocial variables?

6. Do self-serving cognitive distortions mediate the relationship between cyber-bullying and psychosocial variables?

7. Do self-debasing cognitive distortions mediate the relationship between cyber-victimisation and psychosocial variables?

8. Which type of cognitive distortion is a stronger mediator of psychosocial functioning amongst bully/victims?

9. Does gender moderate the relationship between bullying/victimisation and psychosocial functioning?

10. Do students involved in both cyber and real-world bullying demonstrate more psychopathology than students involved in one medium of bullying?
ABSTRACT

This study adopted a socio-information processing approach to examine the impact of cognitive distortions on the psychosocial functioning of bullies, victims, and bully/victims across ‘Real World’ and ‘Cyber World’ contexts. In addition, the study investigated students’ self-awareness of their status within the bully/victim cycle, and the psychosocial impact of gender and dual modality victimisation.

Participants were 532 females and 553 males aged between 11 and 17 years. Participants responded to a series of self-report questionnaires designed to inquire about experiences of ‘Real World’ and ‘Cyber World’ bullying, psychosocial functioning, and self-serving and self-debasing cognitive distortions. From the original sample, 56 participants were classified as bullies, 238 as victims, and 59 as bully/victims, in ‘Real World’ contexts. For ‘Cyber World’ bullying, 16 were classified as bullies, 44 as victims, and 13 as bully/victims.

Using Kappa’s Cohen, it was shown that victims had the highest proportion of correct self-identification. A series of one-way ANOVAs revealed that bullies were differentially characterised by self-serving cognitive distortions, victims by self-debasing cognitive distortions, and bully/victims by both. Using bootstrapping procedures, it was found that for bullies, self-serving cognitive distortions mediated peer attachment and school connectedness. For victims, self-debasing cognitive distortions mediated depression, anxiety, self-esteem, school connectedness, external locus of control, avoidant and problem-solving coping styles, and anger. These results were comparable to those obtained for cyber victims. For bully/victims, only self-debasing cognitive distortions mediated psychosocial functioning (depression, anxiety, and self-esteem). Bootstrapping procedures revealed that gender did not moderate psychosocial functioning. Furthermore, t-test analyses
revealed that students who had experienced dual modalities of victimisation demonstrated poorer levels of psychosocial functioning than students experiencing a single modality of bullying.

Overall, these results suggest that many bullies and bully/victims may not recognise their behaviour as such, and further education may be required. Furthermore, cognitive distortions were shown to be important in understanding the psychosocial functioning of students involved in bullying, suggesting that cognitions should be a major component in anti-bullying interventions.
1. CHAPTER 1

1.1 Bullying

The right to be educated without suffering from victimization is paramount for all school children. The idea that schools are responsible for providing a safe environment for children that nurtures their ability to contribute productively to society means that effective containment of bullying should be a high priority.

The revolution in thinking about bullying began in earnest in 1970, led by Professor Dan Olweus from the University of Bergen. Olweus was one of the premier researchers to recognise the impact of school bullying on its victims, and document its various forms and frequencies within both Swedish and Norwegian schools. Through his initial studies, Olweus was able to demonstrate the importance of addressing bullying in schools, and with the support of the governing educational bodies in Norway, he campaigned for, and successfully introduced, a national anti-bullying intervention. Follow-up studies conducted two years later indicated that the incidence of bullying in schools around Bergen had been halved. It was this profound outcome that gave educationalists internationally the confidence to believe that a resolution to school bullying was possible (see Olweus, 1993).

1.2 Definition and Types of Bullying

The most commonly accepted definition of schoolyard bullying in the context of students was put forth by Olweus (1993), who defined bullying in the following general way: “A student is being bullied or victimised when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other students” (p. 9). Before elaborating on this definition, it is important to emphasise
that a student can be classified simultaneously as bully and victim (‘bully/victim’) if their behaviour meets criteria for both.

The term negative action refers to any behaviours that inflict, or attempt to inflict, harm or discomfort on another. Negative actions can occur through physical contact (such as when an individual hits, pushes, kicks, pinches or restrains another), or words (e.g., threats, taunts, teasing, name calling, or using a person as the butt of jokes). Using words, victims can be bullied about an infinite number of aspects, including bullying about one’s race, religion, sexuality (including preferences and experiences), disability, or general ability. Negative actions can also occur indirectly through the intentional exclusion of a student and the spreading of malicious rumours. In addition, this may entail manipulation of others by restraining their friendship (‘I’m not going to be your friend unless...’), by impeding access to group outings such as parties (Crick et al., 2001), threatening to expose ‘secrets’, and leaving anonymous notes and phone messages (Crick et al.; James & Owens, 2005; Olweus, 1993; Owens, Schute, & Slee, 2001; Rigby 1996, 1998; Salmivalli, Lappalainen, & Lagerspetz, 1998; Smith & Sharp, 1994). More overt displays of exclusion include using huddles, talking loudly, and over-the-top greetings with only the ‘in’ members of a group (Shute, Owens, & Slee, 2002).

In general, research has shown that name-calling, social exclusion, physical bullying, and the spreading of rumours are the most common forms of bullying (Guerin & Hennessy, 2002; Olweus, 1993; Rigby, 1999; Theriot, Dulmus, Sowers, & Johnson, 2005). Relatively less common forms of bullying include sexual bullying, racial bullying, threats of force to do things, and having money or other items stolen (Theriot, Dulmus, Sowers, & Johnson, 2005).
An important component to the definition of bullying within the school context is that an imbalance of power must exist between the students involved, such that the student exposed to the negative action has difficulty defending him or herself, and is to some extent helpless against the behaviour. In this way, conflict between students of equal mental, physical, or emotional strength is not classified as bullying. The intention to harm also distinguishes bullying from other behaviours that may be considered as ‘horse-play’, rough and tumble play, or playful banter between two or more students. However, as will be discussed in Chapter 2, a new form of bullying, termed cyber bullying, challenges these parameters of bullying.

1.3. Prevalence

The prevalence of schoolyard bullying has been extensively researched across several nations. One of the largest studies to undertake quantitative assessment of the prevalence of bullying was conducted in Norway by Olweus (Olweus, 1994). Based on 130,000 responses to his bullying questionnaire, it was established that approximately 15% of students were involved in bullying perpetration or victimisation “now and then” or “more frequently”. Approximately half of the 15% were identified as bullies, and another half identified as victims, with a small proportion classified as both bully and victim, correspondingly labelled “bully/victims”. In British studies, figures of 17% for bullying others, and 20% for being bullied “sometimes or more” have been reported (Boulton & Underwood, 1992; Ziegler & Rosenstein-Manner, 1991). In a large scale U.S study consisting of over 15,000 students, 13% were classified as bullies, 10.6% as victims, and 6.3% as bully/victims (Nansel et al., 2001).
When prevalence rates are examined by age/grade, research suggests that bullying peaks towards the end of primary school and the beginning of secondary school, and declines towards the end of high school (Years 9 – 12) (Espelage & Swearer 2003; Marsh, Parada, Craven, & Finger, 2004; Nansel et al., 2001; Rigby, 1996; Scheithaur, Hayer, Petermann, & Jugert, 2006; Slee 1994a; Slee 1994b). For example, in retrospective reports of bullying, Hazler, Hoover, and Oliver (1991) found that middle school years (Years 7 – 9) were considered the most prevalent years of bullying (47%), followed by Years 4 – 6 (31%), Years 1 – 3 (13%), and Years 10 – 12 (9%) as the least prevalent.

Olweus (1993) has previously argued that with age, victims are less likely to be victimised physically and more likely to be victims of verbal and relational bullying. This argument is supported by the findings of Crick and Grotpeter (1995) and Craig (1998), and is commensurate with age-related increases in sophistication of social and verbal skills (James & Owens, 2004; Owens, Daly, & Slee, 2005). Although, Scheithaur et al. (2006) found that with increasing age, self-reported victimisation, regardless of the form of victimisation, declined.

When prevalence rates are analysed by gender, research suggests that boys are involved in bullying more often than girls, both as victims and as perpetrators (Borg, 1999; Boulton & Underwood, 1992; Craig, 1998; Nansel et al., 2001; O’Moore & Hillery, 1989). However, in the aggression literature, when indirect aggression has been included, sex differences in aggression have been shown to be less pronounced (Craig, 1998; Scheithaur et al., 2006), suggesting that as many girls are involved in bullying as boys.
1.4 Identification of Bullies and Victims

Overall, the prevalence statistics reported suggest that universally, a significant proportion of students are regularly victimised. However, Remboldt (1994) contends that such data may not accurately reflect the frequency of bullying because many incidents of bullying go unreported, or are underreported, leading to a gross underestimation of the true prevalence of bullying. Moreover, some research suggests that those involved in the bully/victim cycle are often unaware that they are part of the cycle (or are reluctant to admit their part). For example, a study by Theriot et al. (2005) found that of 86 students surveyed who met criteria for victimisation based on specific behavioural measures, 44 (51.1%) did not respond as such on a global question, with slightly more females than males accurately identifying themselves as victims. Higher accuracy of self-identification was related to more specific types of bullying (being called names, made fun of, or teased), more total bullying, and more frequent bullying. Consistent with this finding, Stockdale, Hangaduambo, Duys, Larson, and Sarvela (2002) found that those students who self-identify as victims experience more frequent bullying than victims who do not self-identify as such. However, the Stockdale et al. (2002) study was methodologically limited in that it only surveyed verbal and physical bullying experienced over a seven-day period. It is unlikely that the assessment of such a narrow range of victimization experiences within a very short timeframe provides a reliable measurement of victimization and its relationship to self-identification patterns.

These findings are line with results from the forensic literature, that indicate that victims are more likely to identify themselves as such if they are a victim of serious and/or violent crime (Baumer, 2002; Greenberg & Beach, 2004). The reason
why the seriousness of victimization is related to self-identification in serious crime, but not in bullying, may be because young schoolyard victims have expectations or beliefs that schoolyard victimization is a normal and common schoolyard experience. In contrast, among victims of serious crime, the severity and morality of their victimisation experience may be more salient and life-changing, leading to higher rates of self-identification.

Additional research suggests that victims are more likely to self-identify if they perceive that the risk of negative consequences following reporting is low, if they feel threatened and/or fearful, if they are strongly committed to preventing repeat victimization, or if the decision to report is consistent with social norms (Greenberg & Beach, 2004).

Unfortunately, the anonymous nature of most bullying questionnaires precludes the provision of feedback to students about their involvement, who may be unaware or may deny their involvement in bullying. In addition, an inability to identify oneself or a reluctance to admit to one’s part in the process is likely to be a strong barrier against help-seeking behaviour or engagement in anti-bullying interventions. This view is commensurate with that of Taylor, Wood, and Lichtman (1983), who suggested that self-identification of victimization status and a perceived reputation as such amongst peers is “aversive” (p. 19). Indeed, peers are often ambivalent, rejecting, and hostile towards victims, which in effect constitutes secondary victimization (see Kenney, 2002). Secondary victimization for school children may include further peer rejection, and perceptions that one is weak, socially undesirable, or deserving of bullying. Indeed in interviews with primary school aged children, Terasahjo and Salmivalli (2003) found that non-victimised students often underestimated the prevalence of bullying, justified its occurrence, and minimized
the resulting harm. Moreover, victims were often depicted as “odd students” (p. 141) who deserved to be victimised. As with victims of crime (Taylor et al., 1983), these responses from peers may lead many victims to conceal their victim status or to minimise its detrimental impact.

As a consequence of these factors, involvement in bullying may be prolonged, which subsequently increase the risk of psychosocial maladjustment. Indeed, for those who are identified as victims, only a relatively small proportion seeks assistance from others. For example, results from an Australian study suggest that only 33% of persistently victimised students would tell an adult (Rigby & Slee, 1993). However, according to survey results from the Sheffield Anti-Bullying Project, a higher proportion of victims (50%) reported that they had not told anyone about their experience, either at home or at school (Whitney & Smith, 1993). Ahmad, Whitney, and Smith (1991) found that junior and middle school victims were more likely to tell someone from their family than their teachers, and were more likely to tell someone than secondary-school aged adolescents.

Notwithstanding, previous studies have not comprehensively explored bullies’, victims’, and bully/victims’ ability to self-identify their status. The ability to identify oneself in the bully/victim cycle has important implications for psychoeducation about bullying, behaviour change readiness, and for approaches to enhance engagement in anti-bullying interventions. Therefore one of the aims of this thesis is to correct this omission in the literature.

1.5. Intervening in Bullying: Peers and Teachers

It has been suggested by Cowie (2000) that bullying can be stopped when bystanders intervene. Bystanders are more likely to empathise with, and support
victims, and not to approve of bullies or devalue victims for being weak (Carney, 2000; Rigby & Slee, 1991). However, most research finds that empathy on the part of bystanders does not necessarily translate into action. Indeed, a range of observational studies report that peers are present between 60-88% of bullying episodes, and yet only between 10% – 22% of students intervene (Atlas & Pepler, 1998; Craig & Pepler, 1997, 2007; Hawkins, Pepler, & Craig, 2001; Miller, 2007). However, these studies are based on primary school aged children. Research on peer interventions amongst adolescent high school students is severely limited.

When student perceptions of peer intervention are examined across primary and high school aged students, at least one study has shown that between 45% - 52% of students believe that other students intervene “sometimes” or more when bullying occurs (Theriot et al., 2005). An additional study found that approximately 50% of non-involved students were sympathetic to victims and would try to help and not join in, whereas 25% were neutral and a further 25% were not sympathetic (Ahmad et al., 1991). These results were consistent with data from a observational study of primary-school students, in which it was calculated that on average, peers spent 54% passively watching, 21% of their time joining in, and 25% of their time intervening on behalf of victims. Gender differences were also found, with older boys (grades 4–6) being more likely to actively join with the bully than younger boys (grades 1–3) and older girls. Furthermore, younger and older girls were more likely to intervene than older boys when bullying occurred (O’Connell, Pepler, & Craig, 1999).

These studies raise questions about why such high proportions of students do not intervene during incidents of bullying. Briefly, research has identified a number of barriers that deter one from intervening in bullying, including fear of retaliation
(Hazler, 1996; Rivers & Soutter, 1996), not knowing what to do (Hazler, 1996), and general beliefs that it is the responsibility of teachers rather than students to intervene (i.e., it is not students’ business and that victims should ‘stick up’ for themselves) (Slee, 1994c). These barriers suggest that anti-bullying interventions need to address a number of factors, including fears of retaliation, problem-solving skills, punitive attitudes towards victims, and social responsibility for their peers. In addition, whilst anti-bullying interventions are typically conceptualized as only relevant to those who are directly involved in the bullying (i.e., bully, victim, or bully/victim), it is important to recognise these suggestions also apply to non-involved bystanders, who have great potential power to influence the behaviour of their peers.

With respect to teacher intervention, similar rates of intervention have been reported, with at least one study reporting that 57.5% – 59% of students believe that teachers or other adults intervened in bullying “sometimes” or more (Theriot et al., 2005). Indeed research suggests that teachers have a tendency to underestimate the frequency of bullying, perhaps as a consequence of a lack in knowledge about the wide variety of behaviours that can be considered ‘bullying’. For example, Boulton (1997) found that 25% of teachers did not define name-calling, social exclusion, spreading of rumours, or intimidation strategies (e.g., constant staring or stealing from others as bullying).

Teachers’ decisions to intervene in bullying have been shown to be based on a number of subjective decisions about the bullying incident, including whether the incident is considered serious, whether the child is considered responsible, whether the student matches assumptions about victim characteristics and behaviours, whether the teacher feels empathy for the child who is bullied, and the nature of the
school environment (e.g., if the school is considered a ‘rough school’, then teachers are less likely to intervene) (Mishna, Scarcello, Pepler, & Wiener, 2005).

Similarly, Yoon (2004) identified three commonalities among teachers who intervene: (i) high self-efficacy beliefs about behavioural management, (ii) empathy towards victims, and (iii) perceived seriousness of bullying situations.

However, inaction on behalf of teachers when bullying behaviours occur may signal to victims that such incidents are not of importance, which may deter victims from reporting their experiences because they do not expect action to be taken to stop the bullying. This may mean that teachers need further education about bullying, and that biased views or attitudes towards particular students are addressed to ensure that all incidents of bullying are taken seriously and managed effectively.

1.6. Bullying within a Social-Ecological Framework

Bronfenbrenner’s (1979) ecological theory proposes that a reciprocal relationship exists between an individual and his or her immediate surrounding environments, such as home and school environments. These environments, in turn, are influenced by broader structures such as the larger community and society. These environments act as interrelated ecological systems (Capra, 1996), and from this perspective, an individual’s behaviours are seen as a product of these integrated systems and not simply as a result of their own individual characteristics. For example, continuous and reciprocal interactions between children and their environments operate to increase or decrease prosocial and antisocial behaviours in each child (Lerner, Hess, & Nitz, 1991; Sameroff, 1975). Thus, it follows that problems such as anti-social behaviour, such as bullying, are not purely the result of
the individuals’ characteristics, nor due to contextual factors, but rather the result of continuous transactions between the two (Pianta & Walsh, 1996).

Applied to bullying, this framework suggests that bullying is mediated by an interplay of individual characteristics of the child, characteristics of the home, such as parenting practices, and characteristics of the school, which includes the actions of peers, teachers and other school personnel, as well as physical parameters of the school grounds, family factors, cultural characteristics, and even community factors.

This thesis aims to explore several ecological contexts as they relate to bullying. For example, in exploring the child’s own individual characteristics, depression, anxiety, coping, locus of control, and anger as well as cognitive profiles will be examined. Attachment to parents will be explored to further investigate the role of the familial context, and attachment to peers and perceptions of school connectedness will be explored to examine the role of school and peer ecological contexts. It is anticipated that by investigating a broad range of ecological contexts, the mechanisms that contribute to bullying will be better understood, with the notion that such knowledge will lead to more effective anti-bullying interventions.
2. CHAPTER 2

2.1. Cyber bullying

2.1.1. Definition

A relatively new form of bullying that has emerged in recent years with advancing technology is ‘cyber bullying’. Cyber bullying is similar to ‘traditional’ types of bullying in that it involves the intention (or actual) infliction of repeated harm on another; however the harm is enacted through the medium of electronic text or images (Hinduja & Patchin, 2005). Mediums of electronic text include abuse through use of e-mail, mobile phone, instant messaging, as well as defamatory personal websites, and defamatory online personal polling websites (Keith & Martin, 2005).

The following sections of this chapter will examine the prevalence of cyber bullying, and the characteristics of students involved in cyber bullying, including the prevalence of students involved in dual modalities of bullying (i.e., both traditional ‘Real World’ and ‘Cyber World’ bullying), as well as an investigation of gender differences and reporting patterns. This will be followed by a review of psychosocial correlates of cyber bullying, and a brief summary of the differences between cyber bullying and traditional bullying to highlight how the means used to enact cyber bullying may create a new level of distress and have a substantially detrimental impact on psychosocial functioning.

2.1.2. Prevalence

The prevalence rates reported for cyber bullying vary across countries and across different types of cyber bullying. For example, in the UK, 20% of 770 children aged between 11 and 19 reported being cyberbullied or threatened, and 11% reported to have sent a bullying or threatening message to someone else (National
Children’s Home, 2006). Lower rates were found in a larger UK study of 11,227 students, with 7% reporting that they received nasty or threatening text messages or emails “once in a while”, with more girls reporting being threatened than boys, and that this rate increased, mainly in girls, over a 4-year period from 2002 to 2005 (Noret & Rivers, 2006). In a Turkish study, 35.7% students reported behaviours indicative of cyber bullying, 23.8% of cyber-bully/victim behaviors and only 5.9% of the students reported being cyber victims (Aricak et al., 2008). In Canada, Li (2006) surveyed 264 students from three junior high schools and reported that approximately 25% had been victims of cyber bullying, and about 17% had cyberbullied others. In Australia, Campbell (2005) found that 14% of 120 year eight students had been cybervictimised, and 11% had cyberbullied others in the past year. In the USA, Ybarra and Mitchell (2004a) surveyed 1,501 youths aged 10–17 years and found that over one-year, 12% reported being aggressive to someone online, 4% were targets of aggression, and 3% were both aggressors and targets.

A variety of factors are hypothesised to explain the discrepancy in prevalence rates internationally. Two of the main reasons are that studies differ widely in the way that cyber bullying is operationalised (e.g., time frame used as a reference period), and that there are major differences across studies in the types of cyber bullying surveyed. For example, some research has shown that the most common forms of online bullying were name-calling and insults; with the most likely communication tools implicated being instant messaging and message boards (Juvonen & Gross, 2008). Other research, suggests that phone calls, text messages, and emails are the most commons form of cyber bullying, while chatroom bullying was found to be the least common (Smith, Mahdavi, Carvalho & Tippett, 2006, as cited in Slojne & Smith, 2008). These findings are discrepant from findings of studies
conducted within the last one to two years, which suggest that youth are most commonly victimised in a chat room or via computer text message (Hinduja & Patchin, 2008; Kowalski & Limber, 2008; Li, 2007a, 2007b).

These mixed findings may be partly due to differences in the time when the study was conducted, which dictates which technologies were available at the time for assessment. An alternative explanation for these prevalence rate differences centres on the lack of an established, reliable and valid measure of cyber bullying. Methods and instruments used to assess cyber bullying differ widely across extant studies. Notwithstanding, the establishment of a cyber bullying measure is made difficult because the types of cyber bullying that require assessment are constantly changing with new advances in technology. Indeed cyber bullying is an emerging form of bullying, and prevalence rates and forms of cyber bullying are likely to change rapidly in accordance with the development and access to new technologies. Over time, this may mean a net increase in the occurrence of bullying overall, or cyber bullying may to some extent replace traditional ‘real world’ bullying. Preliminary research suggests that cyber bullying is more likely to result in a net increase of bullying, with 43% of participants in one study found to know their aggressor, whereas a higher proportion (57%) were victimised by online-only peers (Wolak, Mitchell, & Finkelhor, 2007). This research will be discussed further in the following section.

2.1.3. Dual Involvement in ‘Real World’ and ‘Cyber World’ Bullying

Several studies have begun to investigate how traditional ‘real world’ bullying and electronic ‘cyber world’ bullying are related. One of the first studies to explore this relationship was conducted by Ybarra and Mitchell (2004b), who used data from
the Youth Internet Safety Survey (Finkelhor et al., 2000), which showed that being physically victimised in the past year significantly predicted being a perpetrator of “internet harassment”. Internet harassment was operationalised as making rude or nasty comments on the Internet or using the Internet to harass or embarrass someone. One limitation of this research is that only physical bullying and general Internet harassment was examined. Notwithstanding, these findings converge with more recent findings by Raskauskas and Stoltz (2007), who surveyed victims of verbal teasing, rumour spreading, and social exclusion and found that these types of bullying were correlated significantly with various types of cybervictimisation, with the same pattern found for bullies.

Other recent research has shown that ‘real world’ bullies and victims are approximately 2.5 times more likely to be cyber bullies and victims, respectively (Hinduja & Patchin, 2008; Li, 2007b). Furthermore, a study by Li (2007a) found that approximately one third of ‘traditional’ victims reported being cyberbullied; and 16.7% also reported being cyber-bullies. Similarly, almost 30% of ‘traditional’ bullies were also cyber bullies and 27.3% were cyber victims. Using correlation, Li (2007a) further demonstrated that ‘traditional’ bullies, compared to non-bullies, tended to be cyber bullies; while ‘traditional’ bully/victims were also likely to be cyber-bully/victims. These findings suggest that all participants involved in the bully/victim cycle can experience both traditional and cyber forms of bullying; as such, involvement in one form of bullying may render individuals more vulnerable to dual modalities of bullying.

The hypothesis that some victims of ‘traditional’ bullying may use the internet to retaliate against their ‘real world’ attacker has also been investigated. However, this hypothesis has not been substantiated in research findings (e.g., Raskauskas &
Stoltz, 2007; Ybarra & Mitchell, 2004). Indeed, Slonje and Smith (2008) found that only one percent of ‘traditional’ victims, cyberbullied others, suggesting that those who are ‘traditional’ victims do not necessarily cybervictimise others or seek ‘revenge’ on those who bully them in ‘traditional’ ways. However, at least one study by Wolak et al. (2007) found that adolescents harassed by known peers in their physical environment were approximately five times more likely to have used the Internet to harass an individual they were “mad at” than youth that were not harassed.

2.1.4. Gender Differences

Despite cyber bullying being an indirect, less visible form of bullying, which is usually typical of the type of bullying engaged in by females, research findings with respect to gender differences are equivocal. For example, evidence suggests that more boys than girls are cyber bullies, and that conversely, more girls than boys are cyber victims (Hinduja & Patchin, 2006; Li, 2006, 2007a). In fact, girls have been reported to be twice as likely to be targeted as victims than boys (Finkelhor, Mitchell, & Wolak, 2000). When specific cyber bullying behaviours have been examined, some research has found that girls are more likely to be bullied by e-mail (Hinduja & Patchin, 2008), text messages or phone calls (Smith et al., 2006, as cited in Slonje & Smith, 2008). However, more girls than boys have been found to bully using text messaging (Slonje & Smith, 2008).

Other studies have failed to find straightforward gender differences. For example, some studies indicate that boys and girls are equally likely to experience cyber bullying as either a bully or victim (Hinduja & Patchin, 2008; Ybarra & Mitchell, 2004b). Similarly, concentrating on perpetrators only, Williams and Guerra (2007)
found that an equal proportion of males and females were involved in cybertbullying. With respect to victims, Beran and Li (2005) found no main or interaction effects in an ANOVA with student gender and grade as independent factors, indicating that boys and girls in lower and higher grades experience a similar frequency of cyber bullying.

2.1.5. Reporting Cyber bullying

Research indicates that approximately 50% of cybervictimisation goes unreported. For example, Li (2007b) surveyed middle school students and showed that out of 133 cyber victims, only 48.9% of the cyber victims reported the incident to an adult (e.g., parents or teachers). Furthermore, when adults are informed, only 63.6% of students believed that adults would intervene.

Consistent with these proportions, Slonje and Smith (2007) revealed that 50% of victims reported not telling anyone, 35.7% told a friend, 8.9% told a parent/guardian and 5.4% told someone else; telling a teacher was never reported. These figures are similar to those reported by Patchin and Hinduja (2006), in which less than 10% of victims, and even fewer victims (5%) under age 18, told a teacher.

Hinduja and Patchin (2008) summarise several reasons for why a substantial proportion of cyber bullying incidents are not reported to other individuals, such as parents or teachers. These include fear of blame and that parents will simply confiscate the source of the problem, such as a phone or a computer, fear of retaliation, fear that the incident will be minimised or discarded by others, embarrassment, and hopeless beliefs that nothing can be done about the situation (especially if the bullying is carried out anonymously).
Gender differences have been reported in terms of attitudes towards cyber bullying and reporting tendencies. Research suggests that females view cyber bullying as a problem but one rarely discussed at school, and that students do not see school personnel as helpful resources for dealing with cyber bullying (Agatston, Kowalski, & Limber, 2007). In addition, Li (2006) reported that females were more likely than males to inform adults about incidents of bullying. Similarly, recent findings of Hinduja and Patchin (2008) suggest that gender differences may also vary as a function of the victim’s relationship with the person to whom the cyber bullying is reported. While it was found that females were overall more likely to report cyber bullying, girls were more likely to tell a friend (57% compared to 50%), whereas boys were more likely to tell a teacher (39% - 21%). The reason why girls are more likely to report cyber bullying than boys may be because girls may place more value on maintaining social equilibrium and agreeability, at least in ‘real world’ contexts of bullying (Andreou, 2001; Miller, Danaher, & Forbes, 1986)

2.1.6. Psychosocial Functioning of Cyber bullies and Victims

Research on the psychosocial correlates of cyber bullies and victims is still in its infancy. Emerging literature suggests that involvement in cyber bullying is correlated with significant psychosocial maladjustment, including lowered self-esteem, poor academic performance, depression, emotional distress, and, in some cases, violence or even suicide (Finkelhor et al., 2000; Meadows et al., 2005).

The following section will summarise the literature on the psychosocial characteristics of students involved in cyber bullying. The current body of literature on this subject is severely limited, but the available literature can be broadly classified into two domains; (i) internalising problems, and (ii) social problems. The
literature on internalising problems mainly relates to depression and anxiety, whereas school connectedness, parental monitoring, and coping skills are the main areas that have been researched under the rubric of social problems. The literature in each area will be discussed in turn.

2.1.6.1. Internalising Problems

Researchers have found that approximately 30% of youth who had been “harassed” on the internet in one year reported at least one or more symptoms of anxiety following the incident, including avoidance of the Internet, rumination about the incident, feeling jumpy or irritable, and/or losing interest in things (Finklehor et al., 2000; Wolak et al., 2006). Similarly, approximately 30% of students reported being extremely upset, between 19% and 24% found it extremely frightening, and between 18% and 22% found the experience very or extremely embarrassing (Finklehor et al.; Wolak et al.). These statistics are consistent with those reported in additional studies (e.g., Beran & Li, 2005; Patchin & Hinduja, 2008; Ybarra, Mitchell, Finkelhor, & Wolak, 2006). In addition, between 40% and 57% of cyber victims report feeling angry on several occasions (Beran & Li, 2005; Patchin & Hinduja, 2008). Hinduja and Patchin (2008) highlight that these reactions are significant because research indicates that unresolved negative emotions can lead to delinquency and interpersonal violence (Aseltine, Gore, & Gordon, 2000; Mazerolle, Burton, Cullen, Evans, & Payne, 2000). For example, if a victim feels threatened, they may consider taking weapons to school for protection. Similarly, depressed victims may be at a higher risk of self-harm.

With respect to depression, Raskauskas and Stoltz (2007) found that in a sample of adolescents aged 13 to 18, 93% reported being negatively affected by the
experience, such that 58% reported that victimization “made me feel, sad, hopeless, or depressed” and 29% reported that it “made me afraid to go to school”. For those who did not know their cyber attackers, nearly half reported it made them suspicious about those around them. In addition, Wolak et al. (2007) found that students harassed by online-only peers (peers unknown in the ‘real world’) were more likely to score in the clinically significant or borderline range for social problems. However, even cyber victims who were harassed by known peers were more likely to report conflictual relationships with parents, physical or sexual abuse, ‘real world’ victimization, and aggressive behavior and social problems as measured by the Childhood Behaviour Checklist (Achenbach 1991).

When comparisons are drawn between all participants involved in the cyber bullying cycle (bullies, victims, and bully/victims), research shows that bully/victims demonstrate the highest level of depressive symptomatology than any other group (Ybarra, 2004; Ybarra & Mitchell, 2004a). In addition, cyber bully/victims have been found to be approximately six times as likely to report emotional distress as a consequence of being cyberbullied, compared to ‘pure’ cyber victims (Ybarra & Mitchell, 2004a). Male cyber victims are eight times as likely to also report experiencing symptoms of major depression, whereas self-reported depressive symptomatology has not been found to be significantly related to the report of internet harassment for females (Ybarra, 2004).

2.1.6.2. Social Problems and Behavioural Problems

Research on the social aspects of students involved in cyber bullying has shown that compared to all other groups involved in cyber bullying, cyber bullies have the lowest levels of school connectedness (Ybarra & Mitchell, 2004a),
perceptions of school climate, and attachment to peers, in addition to higher moral approval of bullying (Williams & Guerra, 2007). However, involvement in cyber bullying, either as a perpetrator or victim, has been positively correlated with recent school problems, assaultive behaviors, or substance use (Hinduja & Patchin, 2007).

Furthermore, bully/victims and bullies have been found to report less parental monitoring than non-involved students, and bullies report less parental monitoring than victims (Ybarra & Mitchell, 2004b). In addition, bully/victims and bullies report poorer emotional bonds to their parents than any other group (Ybarra & Mitchell, 2004b). Patchin and Hinduja (2006) also found that students were reluctant to attend school and removed themselves from the location where they were cyberbullied, while other students felt forced to stay offline completely.

In a study by Ybarra et al. (2006), 38% of cyber victims reported emotional distress (conceptualized as feeling “very or extremely upset or afraid because of the incident” p. 1173), and this was linked to repeated harassment (more than three incidents), harassing others online, ‘real world’ victimization and significant social problems in the borderline/clinical range. These each corresponded to increased odds of being a victim of Internet harassment.

Only one published study to date has specifically investigated the coping styles of cyber victims. Using a sample of 652 participants aged between 11 and 17 years, Lodge and Frydenberg (2007) examined gender differences in coping and found that high levels of cybervictimisation amongst girls was associated with an apprehensive and avoidant style of coping, with coping behaviours representative of excessive worry, tension reduction (use of alcohol or cigarettes), and self-blame. They also were more likely to ignore the concern, keep problems to themselves, and were less likely to seek professional help, including help from either a teacher or
school counselor. In contrast, boys experiencing cyber bullying displayed an apprehensive, yet active coping style. This meant that while these boys demonstrated high scores on worry, wishful thinking, and keeping concerns to themselves, they also engaged in high levels of relaxing tasks and physical activity. Furthermore, this was combined with high levels of focusing on the positive, working hard, and problem-solving actions. In contrast to bullies and victims, students uninvolved in cybervictimisation generally displayed coping styles characterised by optimism, relaxation, and active coping.

2.1.7. Differences between ‘Real World’ Bullying and ‘Cyber’ World Bullying

When cyber bullying is contrasted with traditional ‘real world’ types of bullying, a number of important differences emerge, which may have differential impact upon its victims. For example, traditional forms of bullying are generally limited to the school grounds, whereas cybervictimisation may continue off the school grounds to wherever the victim is located, especially if they are victimised via mobile technology. Furthermore, in contrast to a verbal insult, which disappears from the moment it is uttered, and is only heard by those present at the time, a single defamatory website can stay online for an extended period of time, and can be read by many individuals at any time. In addition, cyber bullies need not be physically stronger than their counterparts, but instead gain their power from their knowledge of information technology. For example, if one knows how to create a website, one can also create a defamatory one. Notwithstanding, serious bullying can also take place using relatively simple means such as email or instant-messaging.

Collectively, these differences highlight that bullying can take place anywhere, at anytime, meaning that the potential frequency of victimisation is much higher than that of ‘real world’ bullying that is limited to the school grounds. Even if a student
ceases to use information technology in order to avoid being cyberbullied, they can
still be victimised by defamatory webpages, pictures, or videos posted of them on the
internet. In this way, the psychosocial impact and scope of cybervictimisation may be
greater than that of traditional, ‘real world’ bullying.

Furthermore, e-mail and mobile phone messages usually contain few
indicators to help the recipient interpret the meaning of the content, which may
heighten a recipient’s experience of anxiety. One can, for example, not see the
sender’s facial expression (or hear his or her intonation). Conversely, a cyber bully is
unable to see how their victim responds to the bullying. As a result, they are less
aware of the consequences of their actions and have fewer prompts (e.g., victims’
facial expression) that may elicit empathy or remorse, which may increase their
bullying behaviour.

2.1.8. Summary of Information on Cyber bullying

Cyber bullying transcends the boundaries of traditional bullying by being able
to be perpetrated remotely at any time or place, which may have a more severe
detrimental impact on the psychosocial functioning of victims of traditional types of
bullying. Prevalence rates and gender differences differ widely depending on the
types of online behaviours being assessed and how cyber bullying is
operationalised. In addition, the majority of research indicates that a substantial
proportion of cyber bullying often goes unreported, which means that the full extent
of cyber bullying may not be known or understood.

Cyber bullying has been found to be associated with a wide range of
emotional, social, and behavioural problems. However, in comparison to literature on
traditional bullying, extant literature describing basic psychosocial correlates of
individuals involved in cyber bullying is severely lacking. Previous studies have focused on describing the frequency and psychosocial correlates of cyber bullying in an exploratory capacity, whereas this thesis aims to uncover the cognitive processes that mediate the relationship between involvement in cyber bullying and indices of psychosocial functioning.
3. CHAPTER 3

3.1. Theoretical Perspectives on Bullying and Aggression

In spite of the plethora of research on bullying, theories specific to bullying are conspicuously lacking. At present, current theoretical perspectives on bullying are drawn from the aggression literature. Early theories used to explain aggression included the instinctual drive theories (Freud, 1933; Lorenz, 1966), and frustration-aggression theory (Dollard, Doob, Miller, Mowrer, & Sears, 1939). However, the assumptions underlying these theories conflicted with subsequent empirical research evidence, which cast doubt on their validity. For example, the instinctual drive theory, which proposes that aggression is driven by an inborn, instinctual system of motivation, was called into question on the basis that inborn drives usually have a clear biological basis, such as water deprivation in thirst and food deprivation in hunger, whereas no such biological basis has been supported for aggression (Bandura, 1973). Similarly, frustration-aggression theory, which posits that aggressive behaviour is motivated by frustration-generated drive, propelled by external stimuli, has been criticised on the basis that frustration is not the only factor that motivates aggression and nor is aggression always a product of frustration (see Buss, 1966; Kuhn, Madsen, & Becker, 1967 for a more detailed discussion). In addition to their respective shortcomings and limitations, a shortfall common to both theories is the omission of cognitive mechanisms that are now believed to contribute to the development and maintenance of aggressive behaviours such as bullying. Currently, the two most influential theories that shape our understanding of aggressive behaviour are the social learning theory (Bandura, 1973) and the social cognitive theory (Miller & Dollard, 1941). Although the social learning theory does not
fully account for the role of cognitive factors in the expression of aggression, it remains an important theory in explaining the role of environmental factors that contribute to aggression. In addition, the social learning theory is empirically supported and its theoretical implications are still today widely applied in behavioural interventions of aggression and general problem behaviours.

3.1.1. Social Learning Theory of Aggression

The social learning theory emphasises the role of external environmental cues as factors that evoke aggression. Bandura (1973) argued that the development, establishment, and control of aggressive behaviour is largely dictated by reinforcement and punishment in a way that is similar to the learning of any new behaviour. New behaviour is learned and performed more frequently when it results in positive outcomes and decreased when it is punished. Social learning theory also encompasses vicarious learning processes, whereby behaviour is learned by observing an influential role model engaging in behaviours that produce either positive or negative consequences, subsequently either increasing or decreasing, respectively, the likelihood of the observer performing that behaviour. However, Bandura (1973) did not conceptualise behaviour as solely manipulated by environmental consequences; behaviour is seen as the product of continuous and reciprocal transactions between the individual and environmental conditions.

The social learning theory suggests that negative interactions with the environment lead to an overall state of emotional arousal that initiates a wide range of possible responses. Possible responses include aggression, withdrawal, help-seeking, or active problem-solving. The response chosen depends on the way an
individual has learned to cope with environmental stress and the efficacy of those responses.

Especially relevant to the current research, the Social Learning Theory was further expanded by Perry, Perry, and Rasmussen (1986) to include assessment of the individual's expectancies and self-efficacy that aggression will lead to favourable outcomes. Their adaptation assumes that cognitive mediators are the lens through which aggressive individuals view the world as hostile and consequently respond to it with anger and hostile expectations. Correspondingly, research has sought to integrate social and cognitive models to explain aggression, which has led to the development of the social-cognitive theory of aggression.

3.1.2. Social Cognitive Theory of Aggression

Social-cognitive theorists of aggression have built upon the foundations of both the social learning model and the frustration-aggression drive theory. These models are founded on a variety of frameworks, including principles of cognitive development (Piaget, 1970), social-information processing (Dodge, 1980, 1986, 1993), social problem solving (Rubin & Krasnor, 1986), cognitive mediators (Guerra & Slaby, 1989, 1990), mechanisms of self-regulation (Bandura, 1973), and cognitive script model (Huesmann & Eron, 1984, 1989). A common denominator of these frameworks is the assumption that behaviour is determined by the way in which an individual perceives and interprets their environment. However, the frameworks differ on explaining how behaviour develops. Some frameworks emphasise that specific behaviours are learned, while others advocate cue-behaviour relationships, perceptual and response biases, as well as attitudes, scripts or schemas of behaviour.
Huesmann and Eron (1984, 1989) argued that aggressive behaviours are learnt in a socio-ecological context of family, neighbourhood, school, peer groups, media, and community. Within these contexts, the individual acquires schemas, or internalised cognitive mediators for social interactions through either vicarious or actual physical reinforcement, which according to Huesmann (1988). These can become encoded, rehearsed, stored, and retrieved to produce aggressive behaviour. These mediators consist of social problem-solving strategies, social scripts, and normative beliefs about aggression (Huesmann, 1988). These mediators are believed to be retrieved in response to environmental cues, but do not necessarily always lead to behaviour (Huesmann & Eron, 1984, 1989). An evaluation of consequences, normative beliefs, and self-regulating internal standards also mediate the decision to perform a particular behaviour. For example, an individual with low internalised prohibitions against aggression or with beliefs that legitimise aggression is more likely to retrieve aggressive schemas and subsequently engage in aggressive behaviour.

As will be discussed in Chapter 3.1.2.1, these beliefs tend to distinguish aggressive from non-aggressive individuals, and may lead to the application of schemas for the expression of aggression. In this way, the aggressive individual may come to view aggression as a legitimate problem-solving tool, as well as a means with which to interact with the world, especially if it is reinforced.

3.1.2.1. Beliefs and Behaviour

As previously outlined, the study of children’s beliefs in the context of aggression has largely emerged from formulations of the social-learning and social-cognitive theories (Bandura, 1973, 1989; Guerra & Slaby, 1990; Miller & Dollard,
Together, these theories suggest that aggressive behaviour is shaped through a combination of both enactive and observational learning, as well as the individual’s own cognitive representation of social interaction. One component of cognitive representation that is underscored from this perspective is the role of self-regulatory beliefs in initiating and regulating aggression. Two types of self-regulatory beliefs that have been proposed are response-outcome expectancies and standards of conduct.

When aggressive behaviour is reinforced or is met with few and insignificant negative consequences, individuals are likely to learn a set of response-outcome expectancies that cultivate future aggression. Consequently, individuals learn to distinguish between appropriate and inappropriate standards of conduct based on these expectancies, and regulate their actions accordingly. In this way, aggression can be fostered when an individual possesses positive response-outcome expectancies of aggression, which serve to reinforce aggressive behaviour. Expected positive consequences include a sense of empowerment through the control of others, increased socio-metric status, access to tangible objects, and personal satisfaction through increased feelings of self-worth (Guerra & Slaby, 1990; Perry, Perry et al., 1986).

These concepts were demonstrated in a study by Slaby and Guerra (1988), using a sample of 144 adolescents comprised equally of males and females ranging in age from 15 to 18 years. Participants were classified into one of three groups: One incarcerated aggressive group and two non-incarcerated groups divided into high- and low-aggressive participants. Participants in each group were assessed for social-problem solving skill (problem definition, goal selection, number of solutions, evaluation of best solution and second-best solution, and number of consequences).
and beliefs supporting aggression (e.g., legitimacy, outcome-expectancies, and blaming of victim). The results indicated that antisocial aggressive adolescents were more likely than non-incarcerated aggressive adolescents to formulate problems in a hostile way, adopt hostile goals, legitimise aggression as a means of increasing self-esteem, and minimise the level of harm caused to victims.

In contrast to expected positive outcomes, cognitive representations of negative expected outcomes, for either oneself and/or others, can inhibit aggressive behaviour. For oneself, negative consequences may include social disapproval, physical punishment, and guilt. For others, negative consequences may include physical, emotional, and psychological harm, and isolation from social relationships. These cognitive representations of expected outcomes help the individual to compare his/her behaviour with a set of norms and standards that help to decide what kind of behaviour is socially appropriate. However, there is some evidence to suggest that aggressive children are unmoved by negative consequence to self and others (e.g., Slaby & Guerra, 1988).

Indeed the relationship between norms and aggressive behaviours has been widely researched (Bandura, 1989; Huesmann, 1988). For instance, research has found that children’s normative beliefs about positive approval of aggression are correlated with aggressive behaviour, and this relationship strengthens with age (Huesmann & Guerra, 1997). More compellingly, Guerra and Slaby (1990) found that changes in beliefs regarding the acceptability of aggression were the only cognitive factors directly connected to the reduction of aggressive behaviour in incarcerated after participation in an intervention program specially tailored for the sample in the study. In a more recent study, Williams and Guerra (2007) found that beliefs endorsing bullying and negative bystander behavior were associated with self-
reported involvement in verbal, physical, and cyber bullying. More specifically, an
increase in one of the six ordinal categories of the moral beliefs measure used in
their study was associated with a 24% increase in the odds of cyber bullying.

To date, only one model specific to bullying has been formulated in an attempt
to explain the role of normative beliefs about the acceptability of bullying and other
cognitive representations in the specific contexts of bullying and victimisation.
Gottheil and Dubow (2001) proposed a tripartite beliefs model to explain the stability
of bully and victim behaviour. This model included normative beliefs about
acceptability of weakness, and provoked and unprovoked aggression; self-efficacy
beliefs about the ability to perform and refrain from aggressive behaviours; and
outcome-expectancy beliefs about the use of aggression. The tripartite beliefs model
suggests that a particular behaviour is most likely to be carried out when it is
perceived as appropriate, achievable, and rewarding. Gottheil and Dubow
emphasise that all three types of beliefs are necessary components in understanding
the belief-behaviour connections for victims and bullies.

In their evaluation study based on a sample of 180 fifth and sixth graders,
Gottheil and Dubow (2001) found strong support for the tripartite beliefs model of
bully behaviour, with higher bully behaviour scores correlating significantly with a
higher level of acceptance of provoked aggression and a lower level of acceptance
of weakness, higher self-efficacy for the use of aggression and four out of six
outcome expectancy variables. These findings were found across both males and
females when bully behaviour was indexed by self-derived measures, offering
support for the connection between beliefs about aggression and bullying that are
supportive, justifying, accepting, and encouraging of bullying, and their relationship
to its actual behavioural expression.
In contrast, no support was found for the tripartite beliefs model of victim behaviour. It was argued by Gottheil and Dubow (2001) that unlike perpetration of bullying, victimisation is not an active choice; often victims are passive recipients of the aggression they experience, and therefore their normative beliefs about bullying are unlikely to have a significant impact on their status as victims. Gottheil and Dubow suggest that an alternative cognitive mediation process based on beliefs about how children might respond to being victimised may have more impact on the behaviour of victims that is within their active control. For example, beliefs about an individual’s self-efficacy to defend against bullying behaviours and beliefs about one’s locus of control to change his/her environment might influence one’s reactions to being victimised. Similarly, outcome-expectancies about one’s choice of reaction may affect one’s willingness to engage in such behaviour.

Consistent with Guttheil and Dubow’s (2001) findings, Pellegrini et al. (1999) found that bullies' attitude toward bullying was more positive, relative to that of victims and non-involved participants. However, in a subsequent study by Pellegrini and Bartini (2000), it was found that cognitions about bullying specifically did not predict bullying status. Pellegrini and Bartini hypothesised that positive attitudes toward bullying may serve to reduce potential cognitive dissonance resulting from discrepancies between one’s view of bullying and dominant peer or school rules, rather than increase the likelihood of bullying directly.

Alternative approaches to understanding aggression in school age children have been based upon social-cognitive approaches. These approaches are based on the premise that social cognitions are the mechanisms leading to social behaviours, including aggression. Correspondingly, an alternative model through which bullying may be explored is the social information processing model. Although
not specific to bullying, the social information processing model (Crick & Dodge, 1994; Dodge & Coie, 1987) is one of the most influential explanatory models of aggression. This model will now be briefly explained.

3.1.3. Social Information-Processing Theory

The Social Information-Processing theory (SIP) was originally developed by Dodge (1986). This model, in its initial conceptualisation was linear and sequential, suggesting that children use four cognitive steps before pursuing a course of action in a social situation. These steps are: (1) encoding the situational cues, (2) representation and interpretation of those cues, (3) mental search for possible responses to the situation, and (4) response selection, followed by behavioural enactment.

The theory was reformulated subsequently by Crick and Dodge (1994) as a nonlinear model, which still shared the fundamental assumptions of the previous model, including the assumption that children bring a set of biological capabilities and a database of memories and past experiences to the social situation.

As shown in Figure 1, the reformulated model includes an additional step (clarification of goals) and consists of six steps: (1) encoding of external and internal cues, (2) interpretation and mental representation of those cues, (3) clarification and selection of a goal, (4) response access or construction, (5) response decision, and (6) behavioural enactment.
Crick and Dodge (1994) hypothesised that during steps 1 and 2, which incorporate the encoding and interpretation of social cues, children selectively attend to internal and external cues, encode those cues, and interpret them. In the interpretation process, children may draw upon one or more independent cognitive processes, such as (a) a causal attribution, which includes an analysis of what occurred in the interaction; (b) an assessment of what others think about the situation and intent attributions; (c) evaluation of goal attainment from previous social interactions; (d) assessment of past performance by focusing on the accuracy of the outcome expectancies; and (e) own and others’ evaluations. Any of these processes may be influenced by information stored in memory (e.g., social schemas, scripts, social knowledge, acquired rules, memory store, peer evaluation and response).
and social knowledge), but engagement in the interpretational processes outlined can also effect information stored in memory databases.

In step 3, children select a goal or desired outcome for the situation (e.g., staying out of trouble, getting even with a person, ignoring a person, making a friend, or obtaining a desired object). It is proposed that although children possess goal orientations or tendencies to the social situation, they also refine those goals and construct new goals in response to immediate social stimuli.

Following from this, in steps 4 and 5, children access and evaluate possible responses from memory (or newly constructed responses) and select the response that they perceive will best enable them to achieve their goals. The evaluation of responses draws upon judgements of outcome expectancies, self-efficacy, and response evaluation. At step 6, the chosen response is behaviourally enacted.

To illustrate the model, consider a child who passes by two peers whispering and laughing in her direction. According to the SIP model, the child’s response is dependent on how she encodes and interprets the available social information, such as the peers’ facial expressions, and how they access and evaluate potential responses to this situation. In one instance, a child may encode non-hostile emotion cues, interpret the peers’ behaviours as innocuous (e.g., the children are sharing a humorous story), and decide that the most appropriate action would be to ignore the peers’ behaviour. A different child may interpret the peers’ behaviour as provocative (e.g., they are laughing at me), become angry, and decide that physically harming the peers is justified and the most appropriate response.

One component of the SIP model that has received relatively less attention is the role of latent social knowledge structures in children’s aggressive behaviour. Latent mental structures are at the heart of the model that hypothetically guides
future processing and subsequent behaviour by functioning as a “lens” through which children process social information. In contrast to on-line information processes that are characterised as proximal antecedents of aggression, knowledge structures, or "database" knowledge, is believed to operate as a cross-situational, distal body of information that influences behaviour by restricting the child's processing of specific information. One type of latent knowledge structure is a set of beliefs, called cognitive distortions (i.e., exaggerated and irrational beliefs or fallacies associated with biases in information processing; see Beck, 1975, 1993), that can lead to significant emotional and behaviour problems, including involvement in bullying and victimisation, and corresponding psychosocial correlates. The literature relating to cognitive distortions is discussed in the following section.
4. CHAPTER 4

4.1. Cognitive Distortions

According to the cognitive-behavioural framework (Beck, 1967a, 1993), the way in which an individual interprets their world and attributes meaning and causality to their experience exert a strong influence on their affective states. These affective states are assumed to subsequently influence an individual's overt behaviour. However, due to a wide variety of factors, such as past experiences and early socialisation experiences, the ways in which an individual may come to interpret their world can become distorted or biased, leading to cognitive distortions.

Cognitive distortions are biased thoughts, beliefs, or attitudes that influence an individual's interpretations of their experiences (Beck, 1993). Ellis (1962) referred to these cognitions as "internalized statements" or "self-statements." Cognitive distortions can range from a mild distortion to a complete misinterpretation (Beck, 1993). Cognitive distortions are believed to emerge as structures of biased attitudes or beliefs, and may influence both general schemata (or "knowledge structures") as well as the various steps in social-information processing, such as encoding, mental representation, goal clarification, as well as response generation, evaluation, selection, and behavioural enactment (Guerra & Slaby, 1988; Huesmann & Eron, 1989; Slaby & Guerra, 1988).

Cognitive distortions can be broadly classified as ether self-serving (e.g., a thought such as "If I’ve lied to someone, that’s my business"), or self-debasing (e.g., a thought such as "I’ll never be any good"). These distortions have been found to correlate with behavioural referents, with self-serving cognitions associated with externalising problems, and self-debasing cognitions with internalising problems (Barriga, Hawkins, & Camelia, 2008; Barriga, Landau, Stinston, Lau, & Gibbs, 2000).
The relations of self-serving and self-debasing causal attributions, to externalising behaviour and internalising behaviour, respectively, are illustrated in a hypothetical scenario constructed by Kendall (1991):

Consider the experience of stepping in something a dog left on the lawn. The first reaction (“Oh, sh—”) is probably a self-statement that reflects dismay. Individuals then proceed to process the experience... The manner of processing the event contributes to the behavioural and emotional consequences. After the unwanted experience (i.e., stepping in it), conclusions are reached regarding the causes of the misstep... Some may attribute the misstep to their inability to do anything right; such as a global, internal, and stable attribution that often characterizes depression (Abramson, Seligman, & Teasdale, 1979). An angry individual, in contrast, might see the experience as the result of someone else’s provocation (“Whose dog left this here – I bet the guy knew someone would step in it!”); attributing the mess to someone else’s intentional provocation is linked to aggressive retaliatory behaviour. (p. 9)

The literature on self-serving and self-debasing cognitive distortions will be discussed in the following subsection in more detail, and their relationship to behaviour and emotional processes will be examined.

4.1.1. Self-Serving Cognitive Distortion

Self-serving cognitive distortions have been studied in theoretical, experimental, and applied literature. Gibbs, Potter, and Goldstein (1995) proposed a four-category typological model of self-serving cognitive distortions:
1. Self-Centred: The individual places excessive importance on one’s own current views and expectations, needs, rights, feelings, and does not consider, or completely disregards the views and feelings of others, or even their own long-term best interests.

2. Blaming Others: The individual externalises blame to other people, groups, or a temporary state (e.g., one was drunk, under the influence of drugs, in a bad mood).

3. Minimising/Mislabeling: The individual minimises the impact or harm of antisocial behaviour on others or sees it as acceptable or even admirable, or refers to others with belittling or dehumanising labels.

4. Assuming the Worst: The individual attributes hostile intentions to others, and assumes that the worst-case scenario is inevitable, with improvement in one’s own or others’ behaviour seen as impossible.

Gibbs et al. (1995) further classified these distortions into primary and secondary cognitive distortions. Primary distortions, which include the Self-Centred cognitive distortions, stem from egocentric bias and are characterised by a sense of entitlement. Individuals with strongly held Self-Centred cognitions who encounter resistance/obstacles in reaching their goals or desires are likely to react with indignation. For example, in an extreme and internationally publicised case, a gang of youths who raped and almost murdered a jogger in Central Park New York recounted being outraged at the victims’ attempted resistance to the assault. However, Gibbs (1987, 1993) also stipulated that even in anti-social individuals, such blatantly harmful actions to others can result in psychological stress, such as guilt and cognitive dissonance, arising from potential discrepancies between one’s
behaviour and self-concept. However, any source of stress may be buffered by secondary distortions.

Secondary distortions (i.e., Blaming Others, Minimising/Mislabling, Assuming the Worst) serve to supplement primary distortions by diffusing feelings of guilt or remorse as generated by the primary distortions, and thereby act to protect one’s self-esteem and self-image when the individual is engaging in anti-social behaviour. In other words, Gibbs (1991) proposed that secondary distortions attenuate the stresses that emerge from the primary distortions. Indeed, early researchers argued that cognitive distortions mediate between certain types of social knowledge or emotions and social behaviour. For example, Sykes and Matza (1957) conceptualise self-serving distortions as misinterpretations that enable individuals to “neutralise” any guilt experienced as a result of their antisocial transgressions. Moral developmental researchers Colby and Damon (1995) have hypothesised that self-serving cognitive distortions mediate the relationship between stage of moral judgement/moral self-relevance and moral behaviour, which presumes that self-serving cognitive distortions can justify anti-social behaviour that might conflict with one’s moral judgement, thereby reducing distress.

For example, using the previous example, the defensive anticipation or minimisation of empathy or guilt that is enabled by *Blaming Others* was illustrated by the several youths who attacked the jogger, who blamed the assault on her being alone at night in Central Park. *Blaming Others* also extends to rationalising victimisation on the basis of one’s own past victimisation. In addition, a participant in a study of incarcerated adolescents explained that he “really tried to prove that his stealing was all right because ‘somebody swiped my own wallet two weeks ago” (Redl & Wineman, 1957, p. 150)
Cognitive distortions representative of Minimising/Mislabelling can also operate to minimise empathy or guilt. Yochelson and Samenow (1976) coined the term “minimising” (p. 499) to describe offenders’ tendency to play down the damages caused by their actions. For example, in the case of the jogger, the act was minimised and mislabelled as “wIdIIng”, meaning spontaneous, uninhibited fun. Similarly, research has shown that highly aggressive adolescents are more likely to endorse statements such as “People who get beat up badly probably don’t suffer a lot” (Slaby & Guerra, 1988) and “People need to be roughed up once in a while” (Barriga, Gibbs, Potter, & Liau, 2001; Liau, Barriga, & Gibbs, 1998).

Cognitive distortions of Assuming the Worst have been shown to be one of the strongest discriminators between aggressive-internalising incarcerated adolescents and non-aggressive, non-internalising adolescents (Frey & Epkins, 2002). Assuming the Worst includes the gratuitous attribution of hostile intention to others. For example, Dodge (1980) found that highly aggressive boys attributed hostile intentions to another boy’s behaviours when their intentions were presented as ambiguous. Dodge, Price, Bachorowski, and Newman (1990) found a strong positive correlation between high levels of hostile attributions and high levels of aggression among juvenile offenders. In a longitudinal study, Dodge, Bates, and Pettit (1990) found that children’s hostile attributional bias and other distortions at age four were associated with previous physical abuse and were predictive of aggression in kindergarten.

Furthermore, highly aggressive adolescents are more likely to assume negative consequences to their reputation if they abstain from aggression. For example, they more frequently endorse statements such as “If you back down from a fight, everyone will think you are a coward” (Slaby & Guerra, 1988). Assuming the
Worst also encompasses overgeneralisations such as “Everyone steals – you might as well get your share” (Barriga et al., 2001).

Overall, Gibbs et al.’s (1995) four-category formulation of self-serving cognitive distortion decompartmentalises self-serving cognitions into one primary and three secondary categories. It aims to provide a comprehensive and ecologically valid framework of self-serving cognitive distortions that are characteristic of aggressive individuals.

Research utilising Gibbs et al.’s (1995) typology has found a strong relationship between self-serving cognitive distortions and antisocial behaviour in both delinquent and non-delinquent adolescent samples (Barriga, Morrison, Liau, & Gibbs, 2001; Liau et al., 1998; Nas, Brugman, & Koops, 2008), suggesting that cognitive distortions in non-delinquent adolescents are an important risk factor for delinquent behaviour that requires further investigation.

Studies have shown that the cognitive distortions that facilitate externalising behaviour are discernible from cognitive distortions that facilitate internalizing behaviours. For example, Barriga et al. (2008) found that in a sample of 239 males aged between 10 – 19 years of age, self-serving distortions (as conceptualised by Gibbs et al., 1995) were specifically predictive of externalising behaviours, whereas self-debasing distortions, which theoretically increase self-reproach through processes such as misattributing blame to oneself or catastrophizing negative experiences, were specifically predictive of internalizing behaviours. These results are consistent with the findings of Leung and Poon (2001), who found that aggressive cognitive distortions differentiated aggressive adolescent from their non-aggressive counterparts.
Research has shown that self-serving distortions with overt behavioural referents (e.g., fighting, arguing, and temper tantrums) are uniquely related to physical aggression/anger, whereas self-serving distortions with covert behavioural referents (e.g., stealing, lighting fires, and lying) are uniquely related to verbal aggression/hostility (Barriga et al., 2008; Liau et al., 1998). These results are consistent with findings that compared to non-aggressive incarcerated adolescents; aggressive adolescents reported more self-serving distortions representing overt behavioural content (Frey & Epkins, 2002). These results suggest that adolescents with overt aggression differ both cognitively and behaviourally from adolescents with covert aggression.

4.1.2. Self-Debasing Cognitive Distortion

Although there is recent work (Mezulis, Hyde, & Abramson, 2006; Rowe, Maughan, & Ely, 2006; Schniering & Rapee, 2004), the role of self-debasing cognitive distortions in maintaining internalising problems has long been recognised (Beck, 1967b; Ellis, 1977). For example, Beck’s (1967) cognitive theory specifies the role of automatic negative thoughts, which are thoughts that immediately arise in response to situations, and are easily accessible to conscious mind. Automatic thoughts can be conceptualized as cognitive distortions that are based on deeply ingrained core beliefs. Beck (1967) proposed that automatic thoughts are organised according to distinct areas of cognitive content such as threat and loss/failure. Furthermore, these thoughts have been shown to be related to actual behavioural expression. For example, automatic thoughts characterised by themes of threat have been shown to be robustly associated with anxiety symptoms among clinically anxious and non-clinical children and adolescents (Ambrose & Rholes, 1995; Jolly,
In contrast, negative thoughts dominated by personal loss, failure, and negativity have been associated with depression (Beck, 1967a, 1976b; Beck, Rush, Shaw, & Emery, 1979).

The distinctiveness and specificity of anxious and depressive cognitions have been demonstrated in research settings. For example, in an early study by Clark, Beck, and Brown (1989) it was found that scores on the Loss Cognitions subscale of the Cognitions Checklist (Beck, Brown, Steer, Eidelson, & Riskind, 1987) accounted for significant, unique variance in depressive symptom level, but that the Threat subscale did not. Conversely, Threat, but not the Loss, subscale accounted for significant, unique variance in anxiety. These results have been replicated in several subsequent studies (Ambrose & Rholes, 1993; Jolly, 1993; Jolly & Dykman, 1994; Leung & Poon, 2001; Schniering & Rapee, 2004a). This notion has been termed the cognitive content-specificity hypothesis (Beck, 1976). However, other studies provide only partial support for the cognitive-content specificity hypothesis, such that depressive cognitions have been found to differentiate between depression and anxiety, whereas anxiety-based cognitions have not (Epkins, 1996; Garber, Weiss, & Shanley, 1993; Laurent & Stark, 1993; Ronan & Kendall, 1997; Treadwell & Kendall, 1996). Abrose and Rholes (1995) demonstrated a progressive diminishment of the relationship of threat cognition to anxiety symptoms as severity of threat cognitions increased, while the reverse pattern was found for depressive cognitions and symptoms. Abrose and Rholes concluded that at very high levels, perceived threat may give rise to helplessness, leading to a shift from anxiety to depressive symptomatology, which may explain the inconsistencies in findings.

Alternative research suggests that negative cognitions are best considered hierarchically, comprising broad cognitive factors shared by a variety of affective
states, in addition to more specific cognitive factors uniquely related to specific syndromes. For instance, Jolly and Kramer (1994) formulated a hierarchical model of cognition, composed of a higher order factor of cognitive characteristics common across most clinical syndromes (i.e., negative cognitions or emotions), and several lower order factors encompassing cognitive content specific to different syndromes (e.g., depressive cognitions, anxious cognitions). The relationship between self-debasing cognitive distortions and depression and anxiety are now discussed in turn.

4.1.2.1 Self-Debasing Cognitive Distortion and Depression

Although clinically Beck’s theory of depression underpins most approaches to the assessment and treatment of depression, much of the recent research on cognitive factors that underlies depression has focused on the cognitive-vulnerability model of depression. The cognitive vulnerability model of depression suggests that an individual is more likely to develop and sustain depression if the individual’s thinking style is characterised by a tendency to attribute stressful events to stable and global causes, to believe that the event will lead to future negative events, and to interpret the event as implying that something is ‘wrong’ with the person (Abramson, Seligman, & Teasdale, 1978). In short, a negative cognitive style is thought to interact with stress to increase risk for depression.

Research has shown that negative life events prospectively predict a more depressogenic attributional style in children (Garber & Flynn, 2001; Nolen-Hoeksema, Girgus, & Seligman, 1992). For example, a positive correlation has been established between negative life events and depressogenic cognitive styles when negative events are classified as chronic stressors (e.g., recurring abuse; Steel, Sanna, Hammond, Whipple, & Cross, 2004). Bullying is one type of negative life
event that can be a chronic stressful life event and is commonly associated with
depression. Indeed researchers have stated that peer victimization was a “previously
underestimated risk factor for cognitive vulnerability” (Mezulis et al., p. 1019). As
discussed previously, theory and research support a relationship between
depression and self-debasing cognitions. However, only a few studies have
investigated this relationship in the context of bullying, and the findings from these
studies are summarised below.

In a longitudinal study conducted by Mezulis et al. (2006), 289 11-year old
children were followed from birth to investigate the origins of cognitive vulnerability to
depression. The results showed that out of three domains of negative life events,
peer victimisation was the only predictor of more negative cognitive styles, as well as
greater cognitive vulnerability to depression when child temperament and maternal
anger expression were included as moderators.

Using an older sample of college students, Gibb, Alloy, Abramson, and Marx
(2003) and Gibb, Abramson, and Alloy (2004), found that students who
retrospectively reported greater peer victimization in childhood or adolescence (in
the former study, prior to age 18, and in the latter study, prior to age 15) had a more
negative cognitive style characterised by internal, stable, global attributions and a
tendency to infer negative consequences and negative characteristics about oneself
following the occurrence of negative life events. This was found to be independent of
parent-related variables such as parental inferential style, dysfunctional attitudes,
histories of major depressive disorder, and emotional maltreatment by parents.

The results of Mezulis et al. (2006), in conjunction with those of Gibb et al.
(2003) and Gibb et al. (2004), strongly suggest that the relationship between peer
victimization and depression may be mediated by cognitive vulnerability. Indeed, in a
later study, Gibb and Alloy (2006) found that cognitive vulnerability to depression moderated the relation between self-reported levels of verbal victimisation and residual change in children’s depressive symptoms. Again, this relationship was maintained even after controlling for parent-related variables. This is consistent with studies that have found that “characterological” self-blame mediates the relationship between self-perceived victimisation and adjustment problems such as loneliness, social anxiety, and low-self-worth. That is, victims with self-blaming tendencies were particularly vulnerable to adjustment problems (Graham, Bellmore, & Mize, 2006; Graham & Juvonen, 1998).

Furthermore, Gibb, Alloy, Walsahw, Comer, Shen, and Villari (2006) found that elevated levels of depression and hopelessness predicted increasing negativity in children’s attributional styles over a six-month period. In addition, the frequency of verbal victimization and levels of depression, both at the initial assessment and during the six-month follow-up were independently predictive of negative changes in children’s attributional styles.

Similarly, Prinstein, Cheah, and Guyer (2005) conducted a study to examine a moderator hypothesis based on the prediction that the combined effects of a critical self-referent attributional style and victimization would predict internalizing symptoms in 116 kindergarteners and 159 adolescents using a hypothetical vignette procedure. In both samples, this hypothesis was supported, with critical self-referent attributions and victimization concurrently and longitudinally correlated with depressive symptoms, which support a cognitive vulnerability–stress model, suggesting that a propensity to draw critical self-referent attributions from ambiguous peer situations is associated with depressive symptoms, especially when high levels of peer victimization are present. Only one study, by Rowe et al. (2006), has examined
depressive cognitions in aggressors. In this study, it was found that although a depressogenic attributional style was implicated in the associations of both oppositionality and delinquency with depressed mood, it was not statistically significant. This suggests that depressogenic attributional style has little effect on levels of depression in aggressors. However, Rowe et al. found that negative life events as measured by the Life Events Scale for Adolescents (Coddington, 1984), mediated the link between oppositionality and delinquency with depressed mood, which may suggest that negative life events, not depressogenic attributional style, increase the risk of both delinquency and depressed mood for some children.

In light of the above findings, negative self-debasing cognitive distortions appear to play an important role in the manifestation of psychosocial functioning, especially internalizing behaviours among victims. As will be discussed, various internalizing problems, such as depression and anxiety, are common correlates of all individuals involved in the bully/victimisation cycle, but particularly among victims.

The mechanisms by which victims of bullying begin to form negative views of the self, which consequently precipitate internal distress (e.g., depression, loneliness, low self-esteem) are speculative. However, drawing upon research from the emotional abuse literature, researchers Rose and Abramson (1992) hypothesised that the relationship between negative events and a generalized negative inferential style develops through the increasing negative inferences made about events. For instance, although a child may initially draw inferences that the negative event was temporary (e.g., “He was just in a bad mood today”), with repeated victimisation, such inferences become unsubstantiated and instead the child may gradually make negative inferences that internalize the event (e.g., “I’m bad and I deserve it”). It is thought that these negative inferences gradually
generalise to other negative events in the child's life, which may lead to the development of a relatively stable negative inferential style, which is characteristic of individuals with depression. A similar process was proposed by Crick and Dodge (1994), who suggested that increasing use of interpretation biases is likely to gradually lead to biases being automatically and rigidly applied to new, originally unrelated situations.

As previously indicated, few studies have examined the role of self-debasing cognitive distortions in the context of bullying and victimization as they relate to psychosocial functioning, especially in adolescent samples. Examining the role that cognitive distortions play in the relationship between bullying/victimization and psychosocial functioning may further our understanding of the cognitive mechanisms that sustain involvement in the bully/victim cycle and that perpetuate impairments in psychosocial functioning.

4.1.2.2. Self-Debasing Cognitive Distortion and Anxiety

Kendall (1985) contended that chronic over-activity of schemas based on themes of threat and danger are primarily responsible for producing states of anxiety. These overactive schemas are assumed to divert processing resources to threat-relevant information and manifest themselves in cognitive distortions (Kendall, 1985). Several anxiety-based cognitive distortions have been identified (see Daleiden & Vasey, 2001), such as attentional bias, which refers to anxious individuals’ tendency to display hyper vigilance toward potentially threatening material; threat-perception biases (interpretational bias), which refers to a tendency to disproportionately make negative interpretations in ambiguous situations; and intensity of attention biases, or the “reduced evidence for danger” bias, which refers
to anxious children’s tendency to draw conclusions that danger or threat is imminent, in the absence of any significant or realistic threat cues.

There is a body of research that suggests that even in non-clinical children, high levels of anxiety are associated with elevated perceptions of threat, elevated ratings of threat, high frequency of threatening interpretations, more intense negative feelings and cognitions, and an early detection of threat (Barrett, Rapee, Dadds, & Ryan, 1996; Hadwin, Frost, French and Richards, 1997; Lu, Daleiden, & Lu, 2007; Muris, Jacques, & Mayer, 2004; Muris, Luermans, Merkelbach, & Mayer, 2000; Muris, Kindt, Bogels, Merckelbach, Gadet, & Moulaert, 2000; Muris, Merckelbach & Damsma, 2000).

More specifically, Muris et al. (2004) speculated that threat perception bias may be a mediating variable in the experience of anxiety. This speculation was based on the results of their longitudinal study of 9 – 13 year old children, in which it was found that threat perception abnormalities at Time 1 led to threat perception abnormalities at Time 2 (4 weeks), which, subsequently, enhanced anxiety disorder symptoms. Similarly, Alden, Taylor, Mellings, and Laposa (2008) found that in a sample of psychology undergraduate students, the relationship between social interaction anxiety and low positive affect was mediated by negative interpretations of positive events. Furthermore, Schulz, Alpers, and Hoffman (2008) found that that negative self-focused cognitions in adults mediated the relationship between trait social anxiety and anxious responding during anticipation of a socially threatening situation.

More importantly in the context of bullying, Erath, Flanagan, and Bierman (2007) reported in their study of middle school students that “[s]ocial-cognitive factors emerged as critical vulnerabilities associated with social anxiety and linked
with social behavior and peer relations” (p. 413). More specifically, through path analysis, they showed that negative social performance expectations (and social withdrawal-disengagement) accounted for the association between social anxiety and decreased peer acceptance in middle school students. However the indirect pathway linking social anxiety and peer victimization was not significant. On the basis of these findings, Erath et al. suggested that the way in which social anxiety interferes with gaining peer acceptance as compared to avoiding peer victimization is different, with peer victimisation being viewed as a “less interactive phenomenon” (p. 414) compared to peer acceptance. Indeed, Graham and Juvonen (1998) found that the relationship between peer victimization and social adjustment (a single index formed from scores on loneliness and social anxiety) was mediated by characterological self-blame. Furthermore, Marsee et al. (2008) found that socially based negative cognitive errors mediated the association between reactive relational aggression and anxiety. Collectively, these findings indicate that socio-cognitive factors, including cognitive distortions related to anxiety and attributions about self-blame can have a significant impact on the levels of anxiety experienced amongst children.

Research has identified that both children (Campbell & Rapee, 1994) and adolescents (Schniering & Rapee, 2004; Stattin, Magnusson, Olah, Kassin, & Reddy, 1991) demonstrate threat concerns along two major continuums: physical threat and social threat (negative evaluation). Research has shown that children with anxiety more frequently experience physical threat cognitions and social threat cognitions than children with depression (Schniering & Rapee, 2002). Moreover, both anxious and depressed children experience more threat perceptions of both types when compared to a sample of non-clinical community children (Schniering &
Rapee, 2002). However, a more recent study by Schniering and Lyneham (2007) found that a group of children with co-morbid depression experienced more internalizing cognitions of social threat and personal failure than either individuals with a co-morbid behavioural disorder or individuals with an anxiety disorder. For self-debasing cognitions relating to physical threat, the co-morbid mood disorder group scored higher than the anxiety-only group, but did not differ from the co-morbid behavioural disorder group. In addition, in a study by Silverman et al. (1995) found that social threats are the most frequent and intense worries reported by young children.

When specific forms of victimisation have been investigated, research shows that social threat and corresponding anxiety has been strongly associated with relational aggression, especially for girls (Bond, Carlin, Thomas, Rubin, & Patton, 2001; Crick & Bigbee, 1998; Galen & Underwood, 1997). It is possible that girls may perceive relational aggression as more socially distressing than boys because this type of aggression can damage social goals that have been shown to be important to girls, such as sustaining positive relationships, receiving social approval (Rose & Rudolf, 2006), maintaining social cohesion and reciprocity, and conversely avoiding interactions that are likely to increase preoccupation with abandonment, loneliness, and hurting others (Blatt, Hart, Quinlan, Leadbeater, & Auerbach, 1993; Henrich, Blatt, Kuperminc, Zohar, & Leadbeater, 2001; Kuperminc, Blatt, & Leadbeater, 1997).

This logic suggests that for boys, who tend to be involved in physical victimization (Crick & Bigbee, 1998; Crick, Casas, & Ku, 1999; Crick & Grotpeter, 1996; Grills & Ollendick, 2002; Paquette & Underwood, 1999; Phelps, 2001; Rudolph, 2002; Storch, Brassard, & Masia-Warner, 2003; Storch & Esposito, 2003),
are more likely to experience cognitions relating to physical threat. However, findings from several recent studies have failed to support this logic (Schniering & Lyneham, 2007; Schneiring & Rapee, 2004b; Schneiring & Rapee, 2002). One reason why studies may have failed to find gender differences on perceived physical threat is because girls, who are more likely to be relationally or verbally victimised, also experience verbal threats of physical harm and/or menacing looks or gestures, which may heighten their physical safety concerns. Additionally, a female who is relationally victimised, and subsequently ostracized, may lack friends who could potentially defend and/or protect against physical harm. In this way, girls’ perceived vulnerability could lead to heightened anxiety about the risk of physical harm, and may therefore experience just as much anxiety about physical threat as boys.

It is important to acknowledge that the nature of threat perception distortions in aggressive children is different from that observed in anxious children. More specifically, threat perception in anxious children is generally associated with the looming of physical danger or negative social consequences (Campbell & Rapee, 1994), whereas the core feature of threat perception in aggressive children pertains to the attribution of hostile intentions to others (e.g., Dodge, 1980). Correspondingly, anxious children will tend to show avoidance behaviour, whereas aggressive children will demonstrate offensive behaviour (e.g., Barrett et al., 1996).

4.1.3. Bully/Victims: Are they Characterised by Self-Debasing or Self-Serving Cognitions?

In light of the research evidence reviewed, it is plausible to expect that victims are more likely to be characterised by self-debasing cognitive distortions, and bullies by self-serving cognitive distortions, but what if an individual is both a bully and a
Research has shown that bully/victims are more ambivalent about themselves than bullies, victims or non-involved controls, nominating themselves both as powerful, and as possessing numerous negative characteristics (Bowers, Smith, & Binney, 1992, 1994). Furthermore, bully/victims are characterised by internalizing distress such as symptoms of depression, anxiety, and other internalising disorders (Haynie et al., 2001; Schwartz, 2000), as well as externalising behavior problems (Haynie et al., 2001; Kumpulainen et al., 1998), and experience more severe and chronic forms of bullying than ‘pure’ victims of bullying (Salmivalli & Nieminen, 2002). Correspondingly these findings suggest that bully/victims might demonstrate a less differentiated cognitive profile characterised by both self-serving and self-debasing cognitive distortions.

However, a different conclusion may be drawn when the origin of bully/victim behaviour is considered. Bully/victimisation behaviour is thought to develop out of the interpretations made about victimisation experiences (Crick & Bigbee, 1998; Crick, Grotpeter, & Rockhill, 1999). For example, if a victimised student personalises the experience and begins to form negative views of oneself, then the student is not likely to act out towards others, and therefore they could be classified as a ‘pure’ victim, and is more likely to hold negative self-debasing cognitive distortions. However, if a victimised student begins to develop negative attitudes towards peers, which may lead to impulse-control problems, anger, and oppositional behaviour (e.g., Haynie et al., 2001; Schwartz, 2000), then a student is likely to develop into a bully/victim. This view would suggest that bully/victims are more likely to be characterised by self-serving cognitive distortions, rather than both types of distortions.
This suggestion is consistent with the contention of Hyman et al. (2006), who argued that bully/victims do not recognise the pain they feel as part-victim, and therefore do not recognise it on the part of their own victims when they bully. Hyman et al. (2006) purported this to be as a result of deficits in empathy, cognitive insight, or moral development, but it is likely that combinations of all three are involved. Indeed, bully/victims have been described as having a “distinctly negative view of themselves and other people” (Andreou, 2000, p. 54), which are likely to impede potential distress arising from cognitive dissonance.

Overall, these views are in line with current theoretical perspectives on bully/victims, which place emphasis on the role of poor emotion-regulation skills (Olweus, 1997; Perry, Perry, & Kennedy, 1992). More specifically, researchers have postulated that the bullying behaviour of bully/victims is indicative of a pervasive inability to modulate anger and irritability, rather than a goal-oriented social strategy (Schwartz, Dodge, Pettit, & Bates, 1997).

However, to the author’s knowledge, no studies have specifically explored the cognitive profile of bully/victims, and in addition, how this relates to psychosocial functioning. Therefore, one aim of the current thesis is to correct this omission in the literature.
5. CHAPTER 5

5.1. Psychosocial Correlates of Bullying and Victimisation

The following subsections of this chapter will review several psychosocial correlates of bullying, including, depression, anxiety, self-esteem, coping, locus of control, attachment, anger, and school connectedness. Each section will summarise the general findings from the literature, and capture how gender and different types of bullying/victimisation may affect psychosocial functioning.

5.1.1. Depression

The relationship between victimisation and depression is well-established in research and in applied settings. The vast majority of studies that have investigated the association between victimisation and depression have found that those students who are victims of bullying tend to show more depressive symptoms than those not involved in bullying (e.g., Boulton & Underwood, 1992; Graham & Juvonen, 1998; Hawker & Boulton, 2000; Kochenderfer & Ladd, 1996a, 1996b; Reid, 1989; Rigby, 1999; Salmon, James, & Smith, 1998; Slee, 1994). In fact, several studies have demonstrated that victims are four times more likely to report depressive symptoms compared to their non-involved counterparts (Bond et al., 2001; Kaltiala-Hieno, Rimpea, Marttunen, Rimpela, & Rantanen, 1999; Kaltiala-Heino, Rimpela, Rantenen, & Rimpela, 2000). A meta-analysis surveying 20 years of literature on the relation between victimisation and psychosocial functioning found that depression was most strongly associated with victimisation, over and above anxiety, loneliness, or general self esteem (Hawker & Boulton, 2000).

Albeit, findings pertaining to bullies are less consistent. Some studies have failed to find an association between being a bully and depression (Camodeca &
Goossens, 2005; Fekkes, Pijpers, & Verloove-Vanhorick, 2004; Juvonen et al., 2003), whereas other studies have found that bullies, not just victims, report high levels of depression (Forero, McLellan, Rissel, & Bauman, 1999; Kaltiala-Heino et al., 1999; Kaltiala-Heino et al., 2000; Kumpulainen & Räsänen, 2000; Roland, 2002; Salmon et al., 1998).

Furthermore, the long-term impact of bullying has been demonstrated in longitudinal studies investigating depressive symptoms of those involved. For example, one study has found that in a sample male perpetrators, frequent bullying (but not infrequent bullying) at age eight predicted severe depression ten years later, even when the influence of childhood depression was controlled statistically (Brunstein-Klomek et al., 2007). This relationship was also mirrored for victims when the scores of frequently and infrequently victimised children were combined (Haavisto et al., 2004). Such studies support previous findings that suggest that all participants in the bully/victim cycle, regardless of status (i.e., victim, bully/victim, or bully), can develop symptoms of depression (Austin & Joseph, 1996; Kumpulainen, Rasanen, & Hentonnen, 1999), but notwithstanding, bully/victims consistently display the highest levels of depression (Haynie et al., 2001; Kalitalia-Heino et al., 1999; Kumpulainen, Rasanan, & Puura, 2001; Swearer, Song, Cary, Eagle, & Mickelson, 2001).

Since males and females have been found to bully and be bullied in different ways (e.g., Crick & Grotpeter, 1995), it is important to give consideration to gender differences, as such differences may have implications suggest that any intervention efforts need be tailored to gender and/or type of bullying. For example, some evidence indicates that relational victimisation, usually associated with females, contributes independently to internalising problems, such as depression and...
withdrawal (Baldry, 2004; Crick & Grotpeter, 1996), whereas physical victimisation, commonly associated with male bullying, relates uniquely to externalising problems, such as physical aggression (e.g., Crick & Grotpeter, 1996; Prinstein, Boergers, & Vernberg, 2001).

Although not specifically investigating different types of bullying, Craig (1998) investigated the effects of bullying and victimisation on various psychological outcomes, including depression, and found that females reported more depression than males. This is consistent with research suggesting that in general, being female is a strong risk factor for negative psychological outcome, even though more boys are involved in bullying (Rigby, 1999; Bond et al., 2001).

However, other research findings fail to support a gender-based dichotomy. For example, Slee (1995) found that involvement in bullying either as a victim or perpetrator was significantly related to higher levels of depression and unhappiness at school irrespective of gender. This is consistent with other studies that have found that levels of depression do not differ across gender among victims (Dao et al., 2006; Kumpulainen et al., 1998; Yang, Kim, Kim, Shin, & Yoon, 2006).

It would appear that findings with regard to the relationship between gender and depression in the context of bullying are mixed. It may be that gender differences only emerge when certain types of bullying that are differentially related to males and females are specifically explored. Few studies have explored gender differences in depression as they relate to different types of bullying.

5.1.2. Anxiety

The issue of childhood anxiety and its relationship to victimisation has been widely researched. Although the connection between anxiety and victimisation has
been posited as bidirectional (e.g., Swearer, Grills, Haye, & Cary, 2004), converging
evidence from prospective studies suggest that anxious behaviours are an outcome
of victimisation, rather than a predisposing characteristic (Bond et al., 2001;
Gladstone, Parker, & Mahli, 2006; Hanish & Guerra, 2002; Sourander et al., 2007)

Overall, higher rates of victimisation experiences have been significantly
associated with greater generalised anxiety (Craig, 1998; Grills & Ollendick, 2002;
Hodges & Perry, 1996; Lagerspetz, Bjoerckqvist, Berts, & King, 1982; Olweus, 1995;
Salmon et al., 1998; Swearer et al., 2001) and social anxiety (Boulton & Smith, 1994;
Crick & Grotender, 1995; Erath et al., 2007; Graham & Juvonen, 1998; Grills &
Ollendick, 2002; Slee, 1994d; Walters & Inderbitzen, 1998). In addition, Hawker and
Boulton’s (2000) meta-analysis revealed mean effect sizes significantly greater than
zero for both social and generalised anxiety, indicating a higher prevalence of these
characteristics in victims than in non-victims. Additional research has found that
students who report being victims of peer violence were between 3.2 and 4.2 times
more likely to report symptoms of anxiety when compared with students not involved
in bullying (Kaltalia-Heino et al., 2000; Salmon et al., 1998).

However there are also a number of studies that have not shown these
patterns of findings. For example, at least one study has found no relationship
between overt and relational victimization and anxiety (either general social anxiety
or avoidance) at a one-year follow-up (Storch, Masia-Warner, Crisp, & Klein, 2007).
Furthermore, a few studies have failed to find differences in anxiety levels amongst
bullies and victims. For example, studies by Kaltiala-Heino et al. (2000) and Duncan
(1999), revealed similarly elevated rates of anxiety for bullies and victims as
compared with non-involved children. Additionally, others studies have reported no
evidence of increased anxiety in bullies (e.g., Lagerspetz et al., 1982; Olweus, 1994;
Salmon, James, Cassidy, & Javoloyes, 2000). In a notable exception, Kaltiala-Heino et al. (1999) found that both female bullies and victims reported higher levels of anxiety than male bullies and victims, suggesting that gender may play a role in moderating anxiety.

However, research findings investigating gender differences are mixed. As alluded to in the previous section, this may be due to differences in types of bullying and victimisation, which may affect males’ and females’ levels of anxiety differently, depending on their salience to the victim, a possibility that is often unaccounted for in research designs. For example, relational bullying may be more salient to females because it affects their social relationships, whereas for boys, physical bullying may be more salient because it may affect their sense of masculinity. Indeed, at least one study suggests that different forms of bullying lead to differential psychological outcomes. Storch, Zelman, Sweeney, Danner, and Dove (2005) compared overt and covert victimisation and found that only overt victimisation, a type of victimisation generally associated with males, was associated with fear of negative evaluation and social avoidance. These results are also consistent with those of Storch and Masia-Warner (2004), who found that in a sample of girls, compared to overt victimization, relational victimization and loneliness was uniquely associated with social anxiety, even after account was made for prosocial behaviour and overt victimization. However, these findings are inconsistent with those of Crick and Bigbee (1998), who found that victimised children, regardless of the form of victimisation they experienced (relational or overt), reported high levels of internalising problems. In addition, they found that for both boys and girls, victimisation (regardless of form), contributed significantly to aggression in the prediction of children’s peer problems, internalising difficulties, and submissive behaviour.
Moreover, Marini, Dane, Bosacki, and YLC-CURA (2007) compared indirect and direct forms of bullying and found that both male and female victims and bully/victims of indirect bullying were significantly more likely to experience internalising problems and peer relational difficulties, although social anxiety was limited to females. The tendency for females to be characterised by more anxiety than males is congruent with Slee (1994d), who found that social-evaluative anxiety was associated with male and female victims of bullying, with social avoidance amongst females. Overall, these findings may suggest that for girls, relational aggression has a serious impact on their mental health, especially anxiety.

Furthermore, the relationship between victimisation and anxiety has been found to be *mediated* by global self-worth for girls, but not for boys (Grills & Ollendick, 2002). This indicates that girls may be more likely to internalise the negative feedback received from their peers during victimisation experiences, perhaps due to their greater emphasis on peer status and friendships (Lagerspetz, Bjorkqvist, & Peltonen, 1988). This interpretation is consistent with Crick and Bigbee (1998), who suggest that children who adopt this negative feedback may develop poor self-views. Similarly, fearful anticipation of future peer victimisation experiences and the possibility of receiving further negative evaluations may lead to anxiety symptoms.

In contrast, Grills and Ollendick (2002) found that the relationship between victimisation and anxiety was *moderated* by global self-worth for boys, but not for girls. That is, the number of anxiety symptoms reported by victimised boys (but not girls) was dependent on their level of global self worth (high versus low). Grills and Ollendick (2002) postulated that boys and girls differentially incorporate the feedback received from peer victimisation experiences. As previously, this is in line with Crick
and Bigbee (1998) who proposed that the psychological difficulties experienced by children who construe victimisation experiences as negative evaluations of the self may be manifested as internalising symptoms. In contrast, they suggest that externalising symptoms may develop as a consequence of the emergence of negative views of peers, rather than of the self, following peer victimisation experiences.

In this contextual framework, along with the general findings that girls tend to report higher levels of anxiety than boys, it appears that girls may be more likely to internalise the views of others, leading to a perception of low self-worth and subsequent symptoms of anxiety. In contrast, boys with a high sense of self-worth may see victimisation as a normative part of their social interaction patterns with peers, thus preventing these exchanges from damaging their self-evaluations. In addition, boys may be more likely to form negative views about their peers following victimisation experiences. This suggests that boys who have high self-worth and negatively evaluate the perpetrator rather than oneself may be buffered from symptoms of anxiety.

The findings of Grills and Ollendick (2002) are similar to findings of Vuijk, Lier, Crijnen, and Huizink (2007), who found that reductions in relational victimization among girls mediated the reduced levels of anxiety and depression. In contrast, reductions in physical victimization among boys accounted for the reductions in generalized anxiety and panic/agoraphobia in boys. Furthermore, as no differences were found in the level of relational victimization experienced by males and females, the gender specific association between relational victimization and anxiety and depression suggests sex differences in the way that relational victimization is
perceived, supporting Crick and Bigbee’s (1998) argument that girls might internalize these relational assaults to a greater degree than boys.

Turning to bullies, the association with anxiety has not been widely investigated. Extant literature is focused on the relationship between aggression and anxiety, and therefore conclusions regarding the relationship between anxiety and bullying have been drawn from this area.

Previous research has supported an association between aggression and anxiety (Crick, Ostrov, & Werner, 2006; Storch, Bagner, Geffken, & Baumeister, 2004; Vitaro et al., 2002). The associations have been found across various types of aggression, including physical, verbal (Kashani, Dueser, & Reid, 1991), and relational (Loudin, Loukas, & Robinson, 2003). Crick, et al. (2006) reported that “the combination of relational and physical aggression is a particularly potent risk factor for adjustment difficulties” (p. 139). Furthermore, as with findings of gender differences in victimization, gender differences in perpetration have also been found. For example, a study by Marsee et al. (2008) found that gender moderated the association between anxiety and reactive relational aggression, such that males with high anxiety showed higher levels of reactive relational aggression than females and males with low anxiety.

Various explanations for the relationship between aggression and anxiety have been proposed. One is that some children may interpret their anxiety as a weakness, and therefore try to overcompensate by being aggressive with their peers. An alternative suggestion is that anxious feelings may lead children to become hypervigilant for signs of danger within interpersonal situations, and therefore aggressively defend against all perceived threats. Indeed, Barrett et al. (1996) found that anxious children tended to misinterpret ambiguous situations as
threatening, which lead some children to react in an aggressive or “retaliatory” manner towards the perceived threat.

Conversely, it has been proposed that anxiety may mitigate aggressive behaviour in children, possibly due to increased caution or inhibition (Swearer et al., 2004). This proposal has been supported in research by Walker et al. (1991), who found that children with conduct disorder with co-morbid anxiety had less peer nominations of aggression than children who had conduct disorder only (without co-morbid anxiety).

Overall, the findings from the above reviewed studies are mixed, and consequently the relationship between anxiety and perpetration remains unclear. Therefore, one of the aims of this study is to add to the existing body of literature to clarify the nature of this relationship.

5.1.3. Self-Esteem

The connection between victimization and self-esteem is well-established. In general, victims are consistently found to have lower levels of self-esteem compared to bullies and non-involved children, whereas bullies tend to have comparable levels to non-involved children (Boulton & Underwood, 1992; Jankauskiene, Kardelis, Sukys, & Kardeliene, 2008; Lagerspetz et al., 1982; Maynard, Joseph, & Alexander, 2000; Olweus, 1978, 1984; Rigby & Slee, 2001; Sharp, 1996). Moreover, there is evidence to suggest that bully/victims have the poorest self-esteem out of all involved in the bully/victim cycle (Andreou, 2000; Marini et al., 2007; O’Moore & Kirkham, 2001). This contention is supported by several studies that indicate that bully/victims aged 8 to 11 years have lower global self-esteem than bullies (Austin & Joseph, 1996; Mynard & Joseph, 1997; O’Moore & Hillery, 1991). However, at
At least one study has found no statistically significant differences in self-reported levels of self-esteem amongst bullies, victims, and non-involved participants (Seals & Young, 2003). Furthermore, other studies have reported lower levels of self-esteem among primary and secondary school aged children who are either bullies or victims (Byrne, 1994; O’Moore & Kirkham, 2001; Yang et al., 2006).

The link between victimisation (including bully/victims) and low self-esteem has been found for both males and females, although the association is stronger for females (Bosacki et al., 2004; Lopez & Dubois, 2005; Marini et al., 2006; O’Moore, Kirkham, & Smith, 1997; Prinstein et al., 2001; Rigby & Cox, 1996). In addition, previous research has found that lowered self-esteem mediates the effect of peer victimisation on emotional functioning for girls, but not for boys (Lopez & Dubois, 2005). One explanation for these gender differences may lie in the differences in attitudes that males and females hold towards bullies and victims. For example, although past research has shown that judgments that students make about bullies and victims vary widely, there is a substantially higher degree of acceptance of bullies and more frequent criticism of victims as ‘wimps’ among boys than is the case among girls, where the disapproval of bullies is much greater (Rigby & Slee, 1991; 1993). This may help to explain why low self-esteem is often found to be more characteristic of girls who bully others but not boys (e.g., Rigby & Cox, 1996).

Although the literature between bullying in general and self-esteem is well-established, relatively few studies have investigated the relationship between different types of bullying and self-esteem. For example, Mynard et al. (2000) found that only verbal victimisation was found to predict low self-esteem for both genders compared to social victimisation, physical victimisation, and damage to property. Similarly, Prinstein et al. (2001) found that relational victimization was the most
consistent contributor of unique variance to the prediction of boys’ and girls’ concurrent loneliness and low self-esteem. However, consistent with previous findings, this association was stronger for girls.

Egan and Perry (1998) review several ways in which low self-esteem might contribute to victimization. First, due to feelings of worthlessness, children with low self-esteem may show reluctance to express their needs or assert themselves during conflicts. Second, research has shown that individuals with low self-esteem expect and accept negative feedback more readily than people with high self-esteem (e.g., Blaine & Crocker, 1993; De La Ronde & Swann, 1993). Third, children with low self-esteem tend to demonstrate signs of depression, cautiousness, and poor self-regulation (Baumeister, 1993; Harter, 1993), which may signal vulnerability to aggressors, rendering persons with low self-esteem as easy targets of bullying. This is consistent with Sharp (1996), who found that victims with low self-esteem and passive response styles had been bullied more extensively and experienced greater stress.

Findings with respect to the self-esteem of bullies have been mixed. For example, O'Moore and Hillery (1991) claimed to have found a "strong relationship between feelings of poor self-esteem and bullying behaviour" (p. 64), but the authors indicated that "while they [bullies] had a lower global self-concept than the controls, the difference was not statistically significant." (p. 64). Similarly, although Seals and Young (2003) found no significant difference in the levels of self-esteem between all groups involved in the bully/victim cycle, by comparison bullies had the highest level of self-esteem, followed by non-involved participants and bully/victims. This is consistent with Olweus’ (1993) contention that bullies do not have poor self-esteem,
but that some subtypes, such as passive bullies (those who assist and reinforce the bully) may be anxious and insecure.

Furthermore, Rigby and Slee (1991, 1992) and Slee and Rigby (1993) found no relationship between the tendency to bully others and poor self-esteem. Indeed, Pearce and Thompson (1998) describe most bullies as having “good self-esteem” (p. 528). Rigby and Slee (1992) suggested that bullying others may actually increase one’s sense of self-esteem through an increased sense of control over others. It has previously been suggested that bullies may score in the normal range on self-esteem measures, but are actually characterised by a “defensive egotism”, a tendency to think highly of themselves but are sensitive to any criticism from others (Salmivalli, Kaukiainen, Kaistaniemi, & Lagerspetz, 1999).

5.1.4. Coping

Coping is one of the most important factors in trying to understand how students respond and react to bullying. Given this, it is surprising that relatively few studies have focused on investigating the link between this important concept and bullying/victimisation.

Lazarus and Folkman (1984) define coping as “constantly changing cognitive and behavioral efforts to manage specific external or internal demands” (p. 141). Subsequently, researchers have grouped coping responses into two main classes: approach and avoidance (Amirkhan, 1990; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000; Folkman & Moskowitz, 2004; Lazarus & Folkman, 1984). Approach strategies involve taking direct action to confront and change the situation in order to ameliorate the stress arising from it. Problem-solving and social support seeking coping mechanisms can be considered examples of approach
strategies. In contrast, avoidance type strategies include physically escaping the situation, denial of the problem, or losing hope (Lazarus & Folkman, 1984). It also includes the use of indirect efforts to cope with problems by distancing oneself, evading the problem, or engaging in distractions in order to reduce feelings of stress (Roth & Cohen, 1986).

In addition to the two approaches to coping, a distinction has also been made between internalising and externalising coping strategies (Causey & Dubow, 1992). Internalizing coping refers to strategies that internalise emotional reactions, such as worrying or blaming oneself for the stressful event (Causey & Dubow, 1992). In contrast, externalising coping strategies are those characterised by externalising behaviours such as aggression, blaming others and swearing. Under this conceptualisation, researchers have found a strong positive correlation between high levels of victimisation and use of internalising coping strategies, whereas higher levels of externalising coping strategies have been associated with bullying behaviours, in both male and female samples (Andreou, 2001; Bijtteber & Vertommen, 1998). Similarly, it has been found that bullies and bully/victims report more angry-externalising coping behaviours than victims, who also exceed non-involved participants in this regard (Caprara & Pastorelli, 1993; Marini et al., 2006). Furthermore, bully/victims have been reported as using more “aggressive” strategies” (physically harm another, scream or swear at another, steal) compared with victims and non-involved children, as well as more “self-destructive” strategies relative to all other children (Olafesen & Viemero, 2000).

Students who use aggressive strategies have been found to be 13 times less likely than those who use problem-solving approaches to de-escalate a bullying interactions (Mahady-Wilton, Craig, & Pepler, 2001), a statistic that highlights the
importance of the teaching of adaptive coping strategies in anti-bullying interventions.

Examining alternative coping strategies, Hunter, Boyle, and Warden (2007) found that victims tend to engage in more Wishful Thinking and Social Support coping strategies compared to students compared to bullies and non-involved students. Wishful Thinking strategies have been associated with poor psychological functioning, conceivably due to the fact that these coping strategies do not directly address the source of the problem (i.e., bullying) (Frydenberg & Lewis, 2002).

However, Hunter and Boyle (2004) reported that students who were bullied for more than four weeks used less social support than children bullied for up to four weeks. In addition, children who reported being bullied ‘sometimes or more often this term’ used more Wishful Thinking and Avoidance than children who reported experiencing bullying less frequently (‘once or twice this term’), suggesting that the selection of coping strategy used may depend on the duration of victimization.

Studies using open-ended assessments to explore how children cope with bullying consistently reveal that ignoring the bully is the most common coping strategy employed among children aged between 10 to 16 years of age, followed by fighting back (verbally and/or physically), confronting the bully, and passivity/submission (Sharp, 1995; Mahady-Wilton et al., 2000). Smith et al. (2008) noted age and gender differences in coping, such that younger children more often reported “crying” or “running away”, whereas the older children more often reported “ignoring the bullies”; girls more often reported “crying” or “asking friends/adults for help”, whereas boys more often reported “fighting back”. They also found that “crying”, “running away”, “telling the bullies to stop”, and “asking adults or friends for help” were related to more frequent bullying.
The gender differences highlighted by Smith et al. (2008) are consistent with previous findings that show that boys more often use physical force or threat to resolve conflicts than do girls (Miller, Danaher, & Forbes, 1986), while girls produce a wider variety of problem-solving alternatives than their male peers (Rubin, 1982). Indeed, gender has been found to moderate between bullying and coping (Cassidy & Taylor, 2005), with female bullies scoring lower on problem-solving control than females who were not bullies, but the opposite for males. This suggests that bullying others may affect girls’ problem solving capacity more negatively than boys.

Furthermore, research suggests that coping styles among victims may also vary according to type of bullying experienced (Olafesen & Viemero, 2000). More specifically, Olafesen and Viemero (2000) found that victims of indirect bullying (e.g., being ignored, having rumours spread about oneself) used significantly more self-destructive strategies coping strategies (e.g., smoking cigarettes, suicidal ideation, self-harm, and engagement in risky behaviours) in stressful encounters in school than for victims of direct bullying. However, this was found to be significant only among girls. This suggests that female victims of indirect bullying may internalise their aggression more than their male counterparts.

However the findings of Olafesen and Viemero (2000) are at odds with those of Bjittebier and Vertommen (1998), who found that in a sample of Belgian adolescents aged between nine and 13- years-old, male victims of both direct bullying and indirect bullying (social ostracism) scored higher on “internalising” coping strategies compared with non-involved male peers; in contrast, male bullies and bully/victims scored higher on “externalising” coping strategies compared to non-involved male peers. Findings for females were less clear, with “internalising” being high in female victims of direct bullying, but not in female victims of ostracism. However, this study
had several flaws, the most notable being the measurement of bullying, which was measured using only three questions from Olweus’s Bully/Victim Questionnaire (Olweus, 1990), with direct bullying measured by asking a general non-specific question: ‘How often have you been bullied in this school term?’.

Furthermore, Kochenderfer-Ladd and Skinner (2002) found that children’s coping styles moderated the relationship between victimisation and maladjustment differently for boys and girls. For males, strategies that focused on resolving problems with peers were associated with lower levels of loneliness and fewer social problems. However, boys who reported seeking social support (i.e., a hypothesised norm-violating strategy) tended to be more lonely, whilst the opposite was found for girls. This is consistent with Baldry and Farrington (2005), who found that emotionally orientated coping strategies are positively correlated with both bullying and victimisation, whereas problem-solving skills were negatively related to bullying and victimisation. Kochenderfer-Ladd and Skinner (2002) argued that boys who resolve peer conflicts independently, conveys confidence, which earns them respect and status amongst their peers. In addition, reluctance to seek social support may stem from boys’ socialisation and relationship experiences (e.g., Hartup, 1983; Wong & Csikzentmihalyi, 1991) and subsequent desire to respond in accordance of their perception of what it is to be masculine (Naylor & Cowie, 1999). Indeed Naylor, Cowie, and del Rey (2001) found that more than twice as many male as female victims reported that they had told no one about being bullied, whereas girls who sought social support reported less social problems.

5.1.5. Locus of Control

In general, research suggests that an individual’s perception of control is an important factor in the selection of coping strategies (e.g., Bowker, Bukowski, Hymel,
& Sippola, 2006). For this reason, constructs of coping and locus of control are strongly interrelated. Locus of control refers to an individual’s beliefs and attributions about the causes of events in their lives (Rotter, 1966). Individuals who perceive that they have control over their environment possess an internal locus of control orientation. For example, beliefs that one’s own efforts and skills affect the outcomes of situations are indicative of an internal locus of control orientation. In contrast, individuals who believe that their environment is under the control of external forces, such as luck, fate, and/or chance, possess an external locus of control orientation. In the context of bullying, locus of control is important because it may influence a child’s first response to victimisation, which may have an impact on the likelihood of future victimisation.

A number of studies have illustrated the relationship between locus of control orientation and choice of coping strategies. For example, several studies show that a high level of perceived internal locus of control is associated with greater use of problem-focused coping in adults (Blanchard-Fields & Irion, 1988; Folkman et al., 1986; Forsythe & Compas, 1987), as well as in children and adolescents (Kliwer, Fearnow, & Walton, 1998), albeit the findings for children and adolescents are less consistent (e.g., Cassidy & Taylor, 2005; Halstead, Johnson, & Cunningham, 1993).

Few studies have specifically investigated gender differences in locus of control in children and adolescents. For example, in one study it was found that girls perceived greater control than boys in both academic and peer-conflict situations (Causey & Dubow, 1992). Furthermore, at least one study has found a positive relationship between internal locus of control problem-focused coping in a group of year seven students, but for girls only (Bowker et al., 2000). However, the opposite
has also been found in study, such that boys demonstrated higher levels of perceived control than girls (Hunter & Boyle, 2002).

Locus of control has been the subject of very limited research in the specific area of bullying. Some researchers have proposed that locus of control may be a type of cognitive processing that influences the establishment and maintenance of aggressive behaviour (Halloran, Doumas, Margolin, & John, 1999; Romi & Itskowitz, 1990). Currently, the existing literature suggests that perpetrators of bullying are more likely to possess an external locus of control orientation; however findings for victims are less consistent.

One of the few studies to investigate the relationship between bullying and locus of control was conducted by Slee (1993). In this study, 76 primary school aged children between 5 and 7 years were categorised as bullies, victims, both, or non-involved based on self- and teacher reports. The children were read a fictional story about a child who began to bully another child through derision, ridicule, and name-calling. The incident was described as being unprovoked and occurring repeatedly over a week. Following the story, participants were asked why they thought the perpetrator bullied the other child. Responses to this question determined the participants’ locus of control orientation, such that those who nominated factors within the bully were classified as having an internal locus of control orientation, whereas those who nominated factors external to the bully were categorised as having an external locus of control. Consistent with findings from the aggression literature, which suggest that a positive relationship between external locus of control and aggression (Halloran et al., 1999; Osterman, Bjorkqvist, Lagerspetz, Charpentier, Caprara, & Pastorelli, 1999), the results showed that bullies were more likely to have an external locus of control orientation. In contrast, victims’ responses
were neutral, failing to demonstrate a preference for internal or external locus of control. For non-involved students, responses were associated with an internal locus of control. However, these results are in contrast to at least two other studies (Andreou, 2000; Haye, Swearer, Love, & Turner, 2003), which showed that victims and bully/victims reported the highest levels of external locus of control, followed by bullies and non-involved students.

For victims, the extent of control one may feel may be dependent on the type of bullying with which they are faced. For example, indirect forms of bullying, such as the spreading of rumours and social exclusion, and which are more common among girls than boys (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992), are difficult to control given their covert nature, and consequently this may make it less clear to the victim what they can do in response. In addition, indirect bullying can isolate victims from their peers, further reducing the options available for support. These factors may lead victims of covert bullying perceive less control over their environment because this form of bullying may be considered more difficult to control. In contrast, overt bullying, such as hitting and pushing, may be easier to control under some circumstances because a victim may be more able to physically remove themselves from the situation.

However, contrary to this line of argument, Hunter and Boyle (2002) found that perceived control was not related to the experience of different types of victimisation (‘Called names’, ‘Threatened’, ‘Forced to give money to bullies’, ‘Left out of things’, ‘Your things damaged’, ‘Rumours spread about you’, ‘Being hit’ and ‘Forced to do things’) in children aged nine to 11 years, but rather to the duration of the bullying. More specifically, girls who experienced frequent bullying (daily or
weekly) tended to hold lower perceptions of control, whereas boys’ perceptions of control are not influenced by the frequency of bullying.

As previously suggested, locus of control perceptions may have implications for how victims of bullying react to their situation. Consequently, in terms of intervention, teaching a child to use problem-focused coping strategies whilst they perceive limited control over their situation is unlikely to lead to more constructive coping strategies unless their perception of the situation is correspondingly changed. If a situation is perceived as being within one’s control to change, then a child may consider implementing the more constructive strategies that they have been taught. This has implications for the structure of anti-bullying interventions, such that perceptions of locus of control need to be orientated appropriately before coping strategies can be taught and adopted.

5.1.6. Attachment

Attachment is defined as an emotional bond that develops between an infant and a parent (Bowlby, 1988). It is theorised that the quality of early parent-child interactions establishes a foundation for later working models (a group of internalised beliefs) of oneself, relationships, and ways of interacting (Bowlby, 1969, 1973). These experiences of early attachments are thought to influence children’s social cognitions through their perception of the social and physical world, as well as their future interactions with others (Ainsworth, 1989; Bowlby, 1988).

Most children (60%-70%) have a secure attachment style (IJzendoorn, 1995; Peterson, 2004) defined by parent–child interactions that are warm, responsive, and stable. In turn, this responsiveness to a child’s emotional needs helps to develop a positive working model of the world and those in it as safe and approachable.
Attachment theorists have proposed that a secure parent–child attachment may serve as protective factor against children’s aggressive behaviour (Ainsworth, 1989; Dryfoos, 1990). It has been argued that children who are securely attached to their parents are less likely to engage in aggressive or antisocial acts, and are more likely to obey rules and regulations (Belsky & Cassidy, 1994; Lyons-Ruth, Repacholi, McLeod, & Silva, 1991). In contrast, early parent-child interactions characterised by anger, hostility, and mistrust, as well as a parenting style that is rejecting or inconsistently responsive and available, are likely to give rise to insecure attachment, and foster an internal working model that other relationships are similarly untrustworthy (McFadyen-Ketchum et al., 1996). This, in turn, may predispose the child to future risks, including aggressive behaviour, delinquency, substance abuse, and emotional disturbances (Greenberg, Rice, & Elliot, 1993). However, Perry, Hodges, and Egan (2001) noted that children categorised as possessing anxious/resistant attachment (a type of insecure attachment) are more likely to be victims of bullying because they demonstrate characteristics that bullies tend to target, such as a tendency “to be manifestly anxious, to cry easily, and to explore little” (p. 83). Perry et al. also suggested that these children generally possess feelings of helplessness and incompetence, which further compounds their vulnerability to victimisation.

Thus, insecure attachment is not exclusively tied to victimisation or perpetration, but can predispose a child to experiencing either or both. Indeed bully/victims have been found to show the poorest levels of social acceptance and peer group affiliation (Andreou, 2000). Similar findings have been replicated by several studies. For example, a study conducted by Roelofs, Meesters, ter Huurne, Bamelis, and Muris (2006) found that in a sample of children aged nine to 12 years-
old, insecurely attached children scored higher on all indices of internalising and externalising symptoms as compared to securely attached children, which supports the idea that poor attachment may render children vulnerable to either becoming a bully (a function of externalising symptoms), victim (a function of internalising symptoms) or both. Similarly, in a longitudinal study, Troy and Sroufe (1987) demonstrated that children classified as being insecurely attached (anxious/avoidant or anxious/resistant) at the age of 18 months, were more likely to be involved in bully/victim problems between age four and five years. Moreover, Myron-Wilson (1998) explored the attachment classifications of children aged 7–10 years who were peer-nominated as bullies and victims, and found that both bullies and victims were more likely to be insecurely attached than non-involved children.

One reason proposed to explain why bully/victims are characterised by the poorest levels of attachment is that as both bullying and victimisation may be independently conceptualised as negative social statuses, the combination of holding both statuses in the case of bully/victims may compound the negativity, and therefore enhance the degree to which they are disliked and alienated by their peers.

As discussed previously, the contribution of parent–child attachment to childhood aggression may be influenced by the development of internal working models characterised by hostility, mistrust, chaos, and insecurity (Greenberg et al., 1993). Working models influence how individuals perceive and think about others. For example, a child with a working model that conceptualises relationships as untrustworthy is likely to misattribute negative intentions upon others in the future. Indeed Bowlby (1969, 1973) conceptualised that the development of biases in perception and cognition serve to maintain the working models established in infancy, and influence a child’s active choice of social environments. Moreover,
Greenberg et al. (1993) have related these working models to Dodge’s (1991) framework and found that attributional processes of aggressive children differ from those of non-aggressive children when actual intentions of a peer provocateur were ambiguous. In such a situation, aggressive boys were found to be more likely to infer hostile intent compared to non-aggressive boys (Dodge, 1980; Quiggle et al., 1992). Dodge (1991) postulated that this might lead an aggressive child to respond aggressively to peers who are involved in a situation that leads to a personal negative outcome for the aggressor.

Hence, the formation of hostile beliefs and intents originating from a maladaptive working model may be an important mediator in the theoretical link between the parent–child attachment and aggression. However, despite the majority of research and solid theoretical framework linking aggression and bullying with disturbances in parent-child attachment, some studies have failed to find a relationship between bully or victim status and attachment profiles. For example, after controlling for gender and verbal IQ in children aged four to six years, Monks, Smith, and Swetenham (2005) found no relationship between perpetration or victimization and insecure attachment. Furthermore, using a sample of fifth and sixth graders, Coleman (2002) found no relationships between attachment to each parent and perceived victimization scores.

One possible reason why attachment has not been found to correlate with bullying and victimization in some studies is that studies generally fail to pay attention to gender differences. For example, in the study previously discussed by Coleman (2002), no relationship was found between attachment and victimization when the full sample was analysed. However, when gender differences were examined, an inverse relationship was found between maternal attachment and the
victimization item (“does anyone every pick on you at school?”) among girls only. Gender differences were also found in relational victimisation, attachment to peers, and social-self efficacy, with girls reporting lower victimisation, stronger attachments to peers, and higher social self-efficacy. Albeit, this trend is in conflict with data reported by other studies (Cohn, 1990; Cohn, Patterson, & Christopoulos, 1991; Lewis & Feiring, 1989), who find that the connections between parent–child attachment and peer relations in middle childhood are stronger for boys than girls.

Overall it appears that findings with regard to the relationship between bullying/victimisation, attachment profiles, and gender are mixed, and it remains an under-researched area, particularly among adolescents and young adults. Research conducted with adolescents and young adults has been derived from forensic samples, whose findings may not be appropriately generalised to non-incarcerated adolescents. For example, among prisoners, Ireland and Power (2004) found that bully/victims reported higher avoidant attachment scores than other groups involved in bullying, whereas bullies and those not-involved reported lower avoidant scores. In addition, Ooi, Ang, Fung, Wong, and Cai (2006) found that in a sample of boys being treated for disruptive behaviours from an outpatient clinic, boys whose parents reported having a higher quality of parent–child attachment were found to be less aggressive, have lower social stress and higher self-esteem.

The trajectory of attachment changes naturally as children move from childhood to adolescence. However, the foundations of attachment formed in childhood with caregivers provide a platform for attachment with peers in adolescence, which play a critical role in shaping interactions and relationships in the social environment. Secure attachment in adolescence may not only serve to prevent victimisation, but may also buffer against possible negative outcomes of
victimisation, such as symptoms of depression, anxiety and lowered self-esteem. However, very few studies have examined attachment and involvement in bullying in an adolescent sample, and this study aims to add to the existing body of literature on this topic.

5.1.7. Anger

As defined by Novaco (1994), anger is "a subjective emotional state, entailing the presence of physiological arousal and cognitions of antagonism, and is a causal determinant of aggression" (p. 32). However, anger does not necessarily always lead to aggressive behavior (Novaco, 1976, 1994). The role of anger in fostering aggression may be influenced, or even counteracted, by social learning factors such as reinforcement contingencies, role modeling, and outcome expectancies. Similarly, aggression may occur in the absence of anger, such as in instrumental aggression motivated by personal gain. Nonetheless, theorists and clinicians have long recognised the link between high levels of anger or anger proneness, and increased risk for aggressive behaviour (Dodge, 1991; Dollard, Doob, Miller, Mowrer, & Sears, 1939; Novaco, 1994).

Surprisingly, the construct of anger has been investigated in relatively few studies of bullying, even though it is frequently discussed in the literature on subtypes of aggression (Cornell, Peterson, & Richards, 1999; Dodge, 1991; Marsee & Frick, 2007; Price & Dodge, 1989). Indeed any attempts to generalize findings from the aggression literature to bullying must be made with caution. In support of this claim, when measures of bullying and aggression have been compared using a sample of incarcerated adolescents (Ireland & Archer, 2004), it was concluded that
‘the relationship between aggression and bullying behaviour is a moderate one’ (p. 41).

Briefly, in the domain of aggression, research has shown that aggressive children tend to have difficulty controlling the expression of anger when provoked by a peer (Crick, 1995), and in general experience anger more often than other children (Arsenio, Cooperman, & Lover, 2000; Eisenberg et al., 1999; Jenkins & Oatley, 2000). These findings have been supported for both boys and girls (Crick & Dodge, 1996; Hubbard et al., 2002; Vitaro, Brendgen, & Tremblay, 2002), even when different types of aggressive behaviours are compared (e.g., verbal, physical, and relational) (Cornell et al., 1999; Marsee & Frick, 2007). Moreover, evidence suggests that aggressive children tend to process emotion information differently than other children. Research has found that aggressive and hostile preschool children tend to attribute “anger” to others (Barth & Bastiani, 1997; Schultz et al., 2000). This evidence parallels findings from several studies that show aggressive children in middle childhood tend to perceive others as acting “mean” or “hostile” toward them, especially in ambiguous situations (Crick & Dodge, 1996; Dodge & Price, 1994; Dodge, Price, Bachorowski, & Newman, 1990; Dodge & Somberg, 1987; Lochman & Dodge, 1994; Quiggle, Garber, Panak, & Dodge, 1992; Wyatt & Hasket, 2001).

Linked to bullying, a useful extrapolation from the aggression literature is the distinction between reactive and proactive aggression (Dodge, 1991). Generally, reactive aggression is characterised by an angry, defensive and volatile approach to others whereas proactive aggression is characterised by instrumentally aggressive acts intended to meet one’s needs or goals, and is not necessarily an angry reaction to a specific precipitating event (Dodge, 1991). Some researchers have conceptualised bullying as a proactive form of aggression, because students who
bully are thought to do so instrumentally to attain sociometric status and maintain control over others. In contrast, victims are conceptualised as reactively aggressive when they respond aggressively to provocation (Crick & Dodge, 1999; Kochenderfer & Ladd, 1997; Pellegrini et al., 1999; Poulin & Boivin, 2000; Price & Dodge, 1989), which in turn has been shown to be related to higher levels of physiological arousal and with more explicit and frequent displays of anger than proactive aggression (Hubbard, Smithmyer, Ramsden, Parker, Flanagan, Dearing, et al., 2002; Pellegrini et al., 1999). However, some studies have found that bullies and bully/victims display both types of aggression (Camodeca & Goossens, 2005; Camodeca, Goosens, Meerum Terwogt, & Schuengal, 2002; Pukkinen, 1996; Salmivalli & Nieminen, 2002).

The few published studies that have examined anger specifically in adolescent samples indicate that the frequency of victimisation is positively correlated with levels of anger, as well as the motivation to retaliate (Biggam & Power, 1998), although this effect has been found to be stronger in boys (Champion & Clay, 2007). Similarly, Rigby (1996) found that victimised girls were more likely to report feeling sad, whereas boys were more likely to indicate feelings of anger. However, research by James, Sofroniou, and Lawlor (2003) found that a similar proportion of male and female victims (over 50%) reported feelings of anger/frustration, even when the frequency of bullying was controlled.

An emerging body of work on emotion processes and victimisation suggests that frequently victimised children manage their emotions in less adaptive ways than non-victims; but these studies have used primary school-aged children, and focused on general emotion regulation or examined maladjusted, and not necessarily victimised students. Among preschool children, there is inconsistent evidence that
differences in managing anger predict more victimisation. For example, in a longitudinal study of preschool children, observer ratings of intensity and frequency of displays of anger in some situations predicted more victimisation in the future and this relationship was mediated by emotion regulation and intending an aggressive response (Hanish et al., 2004).

With respect to bullies, a study by Bosworth, Espelage, and Simon (1999) found that in a sample of 558 middle school students, anger was the strongest predictor bullying, and significantly predicted an increase in bullying over a six month period for both males and females. This is consistent with other studies that have found anger levels to be generally equal amongst male and female bullies (Borg, 1999; Bosworth, 1999; Champion & Clay, 2007). However, a study by Camecoda and Goossens (2005) found that grade six students classified as either bullies, defenders, and children not involved reported that they would be angrier, compared to victims, outsiders, and followers, in response to various hypothetical bullying scenarios, with more boys indicating that they would be angrier than girls when they were bullies or defenders. However, Shields and Cicchetti (2001) found that individual differences in general emotion regulation predicted involvement in bullying as a victim or a perpetrator in a sample of maltreated school-age children; and dysregulated emotion processes predicted symptoms of psychopathology among bullies and victims. Anger, however, was not specifically examined. Although, Graham, Hudley, and Williams (1992) did find that children who were both aggressive and rejected by peers reported more anger than their nonaggressive and non-rejected peers, other studies did not (Quiggle et al., 1992; Waas, 1988). Possibly, the effect is only evident in severely aggressive children.
In forensic settings, anger has been found to be significantly correlated with verbal/psychological and physical forms of bullying in a sample of male juvenile offenders (15-17 years) (Ireland & Archer, 2004). This relationship was also mirrored for young offenders (18-21 years), whose self-reported anger was additionally correlated with theft-related bully items on a questionnaire. However, levels of anger were found to be highest amongst bully/victims (Ireland & Archer, 2004).

Overall, findings with respect to the relationship between anger with gender and role in the bully/victim cycle appears equivocal. Some research indicates that both genders and all participants in the bully/victim cycle (i.e., bullies, victims, and bully/victims) may experience anger, whereas other studies reveal gender differences and associations with particular roles in the bully/victim cycle.

5.1.8. School Connectedness

School connectedness has been defined as “a student’s sense of connection or belonging to one’s school and the experience of caring and support from a network of peers and other school personnel, such as teachers” (Skues, Cunningham, & Pokharel, 2005, p. 19). High levels of school connectedness have been associated with a reduced risk for negative development outcomes, such as the emergence of aggressive behavior and exposure to violent behavior (Brookmeyer, Fanti, & Henrich, 2006).

Only a handful of studies have examined the relationship between involvement in bullying and levels of school connectedness. In general, previous research using samples ranging in school years 7 to 12 indicates that victimisation is associated with low levels of school connectedness, whereas non-involvement in bullying is associated with higher school connectedness (Eisnberg, Neurmark-
Sztainer, & Perry, 2003; Skues et al., 2005; You et al., 2008). However, at least one study has found higher levels of school connectedness among bullies compared to victims and uninvolved children (Cunningham, 2007).

In a major study by Wilson (2004), it was found that within schools characterised by either positive or negative school climates, students with low school connectedness were more physically (39% - 46% of students) and relationally aggressive (56%-59%), compared to their highly connected peers in both positive and negative school climates, who demonstrated lower levels of physical (17% - 20%) and relational aggression (40%-46%). Furthermore, it was found students who perceived a high sense of school connectedness, were more likely to experience low levels of victimization, in positive and negative climates (64% and 73%, respectively). These findings suggest that strong school connectedness has some protective effect, irrespective of school climate. Similarly, students with a high perceived sense of school connected, are less likely to be perpetrators and less likely to be victims when compared to their peers who perceive low connectedness, irrespective of school climate.

The profound impact of school connectedness on a students' well-being was further demonstrated in a year-long longitudinal study by Shochet, Dadds, Ham, and Montague (2006), who examined the relationship between school connectedness and eighth grade students’ anxiety, depressive symptoms, and general behavioral functioning (comprised of hyperactivity, emotional symptoms, conduct problems, peer problems, and prosocial behavior). It was found that none of the adjustment problems contributed to subsequent school connectedness one-year later. Rather, the effects were in the opposite direction, such that school connectedness predicted subsequent adjustment problems, although the pattern of
relations varied across gender. School connectedness predicted boys’ and girls’ depressive symptoms, girls’ anxiety, and boys’ general behavioral functioning. Although, a more recent study by Loukas, Ripperger-Suhler, and Horton (2008), found support for a bidirectional relationship between school connectedness and conduct problems, for both boys and girls over a one-year period.

In a review by Maddox and Prinz (2003), it was highlighted that gender may influence the relationship between school connectedness and students’ adjustment (substance use, delinquency, antisocial behavior, self-esteem). For example, whilst middle school girls generally report higher levels of school connectedness than boys (Ma, 2003; Simons-Morton, Crump, Haynie, & Saylor, 1999), evidence regarding the role of gender as a moderator of school connectedness effects is equivocal. Some studies have failed to find gender differences in the association between school connectedness and aggression (Brookmeyer et al., 2006; Dornbusch, Erickson, Laird, & Wong, 2001), whereas others report that school connectedness effects vary across gender for some adjustment outcomes, but not others (Shochet et al., 2006).

Some researchers have argued that low school connectedness may develop out of the perceptions of victims that peers do not help when they are being victimised. For example, Cowie (2000) suggested that bystanders who intervene will cause the bullying to stop in most cases. As a result, students who perceive their peers as passive bystanders may form negative attitudes towards not only the perpetrators but also the bystanders. Hence students may form a ‘me’ versus ‘them’ perspective in relation to their peers. For instance, students may initially perceive themselves as being similar to their peers, and part of a larger collective. However, if they are bullied, some students might consider themselves to be different from their
peers, and subsequently feel alienated by them, thus reducing their sense of connectedness to their peers.
6. CHAPTER 6

6.1. Method

6.1.1. Participants

Participants in the present study were 1086 Year 7 (n = 434), 8 (n = 155), 9 (n = 316), 10 (n = 168), and 11 (n = 13) students from schools in the Western metropolitan and semi-rural regions of Melbourne. The sample consisted of 532 females (49.0%) and 553 males (50.9%), with one person not reporting their gender. Ages of the participants ranged from 11 to 17 years (M = 13.92, SD = 1.24). The socioeconomic status of the areas from which the schools were located varied from what would be considered lower class, to upper-middle class as based on classifications derived from the Socio-Economic Indexes for Area (Australian Bureau of Statistics, 2006). The majority of participants nominated Australia (87.4%) as their country of birth, followed by a small number who nominated New Zealand (2.0%), and the remainder of the sample nominated 34 other different countries of birth. These participants were classified as being born in countries of Asia (6.1%), Europe (3.2%), Africa (0.6%), South America (0.5%), and North America (0.1%). Two participants were born internationally but did not specify the location, and two other participants failed to respond to this question.

6.1.2. Materials

A questionnaire booklet comprising 12 instruments (see Appendix A) was developed for the study. The instruments, described below, were selected to provide demographic information as well as information about participants’ experiences of both (i) bullying in general and in cyber-bullying (i.e., as a bully, victim, bully/victim);
(ii) thinking; (iii) feeling and; (iv) behaviour. The sequencing of instruments within the questionnaire booklet was counterbalanced to minimise any ‘order’ effects.

6.1.2.1. Demographics

6.1.2.1.1. Demographics Questionnaire

A demographics questionnaire was used to gain information about participant characteristics such as age, ethnicity, socio-economic status, and family living arrangements. It also included preliminary questions about bullying (e.g., ‘Do you think you bully other students?’ and ‘Do you think you are bullied by other students?’) to investigate how accurately students could self-identify their bully and/or victim status, prior to being given a definition of bullying.

6.1.2.2. Bullying questionnaires

Two bullying questionnaires were used to assess ‘Real World’ and ‘Cyber World’ bullying.

6.1.2.2.1 Revised Olweus Bully/Victim Questionnaire

The Revised Olweus Bully/Victim Questionnaire (ROVBQ; Olweus, 1996) comprises 40 questions measuring bully/victim problems such as, exposure to and enactment of various physical, verbal, indirect, racial, or sexual forms of bullying/harassment. It also covers questions pertaining to the location of where the bullying occurs, attitudes towards bullies and victims, and the extent to which the social environment (e.g., teachers, peers, and parents) is informed about and responsive to the bullying.
The ROBVQ is completed anonymously and has a multiple choice scoring format that enables respondents to be categorised as “victim”, “bully”, or “bully/victim”. The ROBVQ also provides a clear definition of bullying behaviour with an exclusionary clause to denote what is not considering bullying in comparison to other behaviours. Normative data were obtained on a sample of 130,000 students aged between 8 to 16 years-old from Norway, the United States, and the United Kingdom.

The ROBVQ has been repeatedly analysed for its psychometric properties utilising representative samples of more than 5000 students. Internal consistency and test–retest reliability of the questionnaire from large representative samples are satisfactory (e.g., Genta, Menesini, Fonzi, Costabile, & Smith, 1996; Kyriakides, Kaloyirou, & Lindsay, 2006; Olweus, 1997). For example, Cronbach alphas ranging from .80 to .90 have been reported for being victimised, bullying others or both, on an individual level. When the data are analysed based on the school as the unit for analysis, Cronbach alphas in the .90 range have been reported (Olweus, 2002).

Solberg and Olweus (2002) assessed the functionality of two dichotomised global variables of victimisation (“victims”/“non victims”) and bullying other students (“bullies”/“non bullies”), and obtained correlations between dichotomised global and specific variables. Victimisation on specific variables was defined as having been bullied 2 to 3 times a month or more frequently in at least one of the seven different forms of victimisation listed on the questionnaire. Correlations for dichotomised global variables and specific prevalence estimates for being bullied and for bullying others were \( r = .79 \), and \( r = .77 \), respectively. Furthermore, using a Spearman-Brown formula to obtain lower bound estimates for differentiation of global and specific
variables with schools as the basis for analysis, the reliability estimate for bullying other students was estimated at $r = .87$ and $r = .88$ for victimisation.

Support for construct validity of the two main dimensions of the questionnaire (being victimised and bullying others) was provided in a study by Bendixen and Olweus (1999), who reported strong linear relations between degree of victimisation and variables such as depression, poor self-esteem, and peer rejection, and between degree of bullying others and various dimensions of antisocial behaviour and several aspects of aggressive behaviour.

Several other studies have investigated the validity of the earlier versions of the ROBVQ. For example, an early study by Olweus (1978) showed that composites of 3 to 5 self-report items on being victimised or bullying others, respectively, correlated in the $r = .40 – .60$ range with reliable peer ratings on related dimensions (Olweus, 1977). Similarly, Perry, Kusel, and Perry (1988) reported a significant correlation of $r = .42$ between a self-report scale of three victimisation items and a reliable measure of peer nominations of victimisation in high school adolescents.

Furthermore, attesting to the measures convergent validity, Olweus (1991) found that class-aggregated student rating estimates of the number of students in the class who were bullied or bullied others during a one-year period were highly correlated ($r = 0.6-0.7$) with class aggregated estimates derived from the students' own reports of being bullied or bullying others.

Finally, Austin and Joseph (1996) “concluded that one of the best methods for establishing incidence from middle school age upward was the use of anonymous self-report questionnaires such as the Olweus Bully/Victim Questionnaire” (p. 457). Furthermore, the ROBVQ was endorsed by the Blueprints Model Programs at the Centre for the Study and Prevention of Violence (CSPV; 1999) at the University of
Colorado at Boulder, a program cited in most bullying studies as the standard of excellence for bullying programs.

6.1.2.2.2. Cyber bullying Questionnaire

This questionnaire was developed by the author to investigate electronic forms of bullying/victimisation. The mediums of electronic bullying surveyed included mobile phone text messaging, e-mail, chatroom, instant messaging, public websites, and mobile phone multimedia (photographs and video clips). The response format was modeled on that of the ROBVQ (Olweus, 1996) described previously. Participants who reported experiencing a particular form of bullying at least ‘once or twice’ were prompted to indicate what action they took following the incident, and whether they knew the perpetrator (Yes/No). Participants were also asked to estimate the average number of hours per week spent using the internet. This included time spent for academic purposes, as well as for leisure purposes such as downloading music, using email, online games, chatting, blogging, general browsing, and commenting on social networking sites (e.g., Facebook, MySpace).

6.1.2.4. Cognitive Distortions

In order to capture the range of cognitive distortions experienced by both bullies and victims, both externalizing and internalizing cognitive distortions were assessed. The How I Think Questionnaire, detailed below, was selected to assess externalising cognitions, but as it does not assess internalising cognitions, an additional measure, the Children’s Automatic Thoughts Scales was utilized to measure internalising cognitions.
6.1.2.4.1 How I Think Questionnaire

The How I Think (HIT) Questionnaire (Barriga et al., 2001) is designed to measure self-serving cognitive distortions as they relate to externalising problem behaviour, particularly aggression and delinquency. It consists of 54 items, 39 of which tap into cognitive distortions, and 15 of which are control items – positive fillers (7 items) and anomalous responding (8 items). Responses are made along a six-point Likert scale ranging from Agree Strongly (1) to Disagree Strongly (6). A score of 4.0 or higher on an individual item indicates the presence of cognitive distortion. Based on scoring guidelines, protocols evidencing Anomalous Responding Scale scores above 4.25 were excluded from the analyses (n = 204).

Each of the cognitive distortion items represents one or another of Gibbs and Potter’s (Gibbs, 1993; Gibbs, Potter, & Goldstein, 1995) four categories: Self-Centered (9 items), Blaming Others (10 items), Minimising/Mislabling (9 items), and Assuming the Worst (11 items). The items also refer to one or another of four categories of antisocial behavior listed in the DSM-IV-TR (American Psychiatric Association, 2001) under Conduct Disorder and Oppositional Defiant Disorder. The categories are Opposition-defiance, Physical Aggression, Lying, and Stealing. For example, the item “People force you to lie when they ask you too many questions” represents a Blaming Others cognitive distortion applied to a Lying behavioral referent. Summary scores for each type of cognitive distortion can be computed by summing item totals. Furthermore, three summary scales are available: the Overt Scale (based on items representing Opposition-Defiance and Physical Aggression); the Covert Scale (based on the lying and stealing items); and the overall score based on the eight subscales.
The HIT Questionnaire includes cut-off scores for the cognitive distortions subscales, behavioural referent subscales, and summary scores scales. The cutoff scores range from 2.74 to 2.98, which correspond to the 73rd and 83rd percentiles in the normative sample, respectively. Scores within these percentiles are considered to be in the “borderline-clinical” range, with scores above the 83rd percentile considered in “clinical” range, and scores below the 73rd percentile considered in “nonclinical range.”

The HIT manual (Barriga et al., 2001) includes detailed psychometric properties for internal consistency, and convergent, divergent, and construct validity based on four validation samples consisting of male and female incarcerated adolescents, psychiatrically hospitalized adolescents, adolescents court mandated for psychological evaluation, and non-clinical university students.

With respect to internal consistency, Cronbach’s alphas ranged from $\alpha = .63$ to $\alpha = .92$ for the various samples. Internal consistency estimates of the overall score were excellent, ranging from $\alpha = .92$ to $\alpha = .96$. The Overt and Covert Scales also exhibited high internal consistency, with alphas ranging from $\alpha = .83$ to $\alpha = .94$.

These results are comparable with those of Nas et al. (2008) and Barriga and Gibbs (1996). Barriga and Gibbs (1996) reported high correlations between the cognitive distortion subscales and the overall HIT scale, with $r$’s ranging from $r = .87$ to $r = .92$. Moreover, the cognitive distortion subscales correlated highly with each other, with $r$’s ranging from $r = .71$ to $r = .30$. The behavioral subscales of the HIT displayed a similar correlation pattern. Additionally, the Anomalous Responding scale demonstrated slightly lower, but adequate internal consistency, $\alpha = .64$. In the current sample, the internal consistency for the overall score was $\alpha = .92$, between $\alpha = .72$ and $\alpha = .75$ for the cognitive distortions scales, between $\alpha = .69$ and $\alpha = .85$ for
the behavioural referent subscales, $\alpha = .86$ for the Overt summary scale and $\alpha = .87$ for the Covert summary scale.

With respect to convergent validity, the manual states that the overall HIT questionnaire scores correlate significantly with measures of antisocial behaviour such as the Externalising Scale of the Youth Self-Report across all validation samples ($r$'s ranging from $r = .45$ to $r = .66$), with incarcerated adolescents having the highest correlation. Furthermore, scores on the HIT questionnaire are correlated with the self-report delinquency for psychiatrically hospitalized adolescents. These psychometric findings are consistent with those of Barriga and Gibbs (1996), who demonstrated that scores on the HIT questionnaire correlated significantly with the Externalizing Scale of the Youth Self-Report Form, $r = .55$, as well as its component subscales, Aggressive Behavior and Delinquent Behavior, $r = .54$, and $r = .46$, respectively. The HIT correlated with the Nye-Short Self-Reported Delinquency Questionnaire (Nye & Short, 1958) as well, $r = .36$. Furthermore, correlations between the cognitive distortion subscales and self-reported antisocial behavior (i.e., Nye-Short scores and Externalising Scale scores) were all significant ($r$'s ranged from $r = .23$ to $r = .55$). The same pattern of results was displayed for the behavioral subscales of the HIT questionnaire. In addition to self-report, the HIT questionnaire scores are correlated with parent reports of antisocial behavior as measured by the Externalising Scale of the Childhood Behavior Checklist (Achenbach, 1991) for incarcerated adolescents and university students. The questionnaire also correlated with frequency of school suspensions in the high school group ($r = .28$) (Barriga & Gibbs, 1996). Similar findings have also been found with teacher reports of aggressive behaviour (Nas et al., 2008).
Furthermore, the HIT questionnaire has been found to correlate positively with a measure of “deficient cognitive processing” (Nas et al., 2008, p. 187). The Social Information Processing step “aggressive response generation”, which correlated significantly, \((r\:\text{s}\:\text{ranging\ from}\ r = .20\ \text{to}\ r = .46)\) with all distortion scales, except for Assuming the Worst in the students with a higher level of education. Conversely, the step “positive emotion regulation” was significantly negatively correlated with the subscales \((r = -.26\ \text{to}\ r = -.37)\) (Nas et al.). Moreover, high negative correlations were found between cognitive distortions and social skills \((r = -.53\ \text{to}\ r = -.60)\).

Divergent validity, as reported in the manual, is evidenced by an absence of correlations with chronological age in any of the subsamples, or with socioeconomic status in incarcerated adolescents or university students. Furthermore, HIT scores did not correlate with IQ scores, academic achievement or grade point average for incarcerated adolescents. This is consistent with findings of Nas et al. (2008).

The HIT questionnaire manual provides extensive information on the construct validity of the measure, and this information will be summarized briefly. Barriga (1996) found an inverse correlation between HIT scores and scores on the Sociomoral Reflection Measure – Short Form (Gibbs, Basinger, & Fuller, 1992). In addition, Woo (1997) found an inverse relationship between the HIT questionnaire and a self-report measure of empathy. Barriga (1996) also found a similar relationship between HIT scores and the Adapted Good-Self Assessment (Arnold, 1993, adapted from Harter & Monsour, 1992), a measure of relevance of moral virtues to the self-concept. However, Nas et al. (2008) reported mixed findings in this area.

Assessment of cognition-behaviour relationships has also provided evidence for the construct and discriminative validity of the HIT questionnaire. For example,
Barriga et al. (2001) compared the HIT questionnaire with a measure of self-debasing cognitive distortions (as measured by the Children’s Negative Cognitive Error Questionnaire, CNCEQ; Leitenberg, Yost, & Carroll-Wilson, 1986) and found that scores on the HIT correlated specifically with externalising behaviour, whereas scores on the CNCEQ were uniquely correlated with internalising behaviours. This type of relationship was mirrored when the Overt Scale and Covert Scale were compared to their expected behavioural referents (Liau et al., 1998). With respect to discriminant validity, the HIT manual states that the HIT questionnaire has successfully discriminated court mandated adolescents from urban high school students and psychiatrically hospitalised externalising youth from urban high school students (Barriga & Gibbs, 1996).

Face validity of the cognitive distortion items was evaluated by 10 judges. High accuracy was reported with 16 out of the 39 items being accurately classified by 100% of the judges, 13 items by 90% of the judges, one item by 80% of the judges, 5 items by 70% of the judges, and 2 items by 60% of the judges. A confirmatory factor analysis was performed to assess the structure of the instrument, with results supporting a division by the four cognitive distortion categories. This structure was also supported more recently in a Danish study against both a three- and seven-factor model (Nas et al., 2008).

6.1.2.4.2. Children’s Automatic Thoughts Scales

The Children’s Automatic Thoughts Scales (CATS; Schniering & Rapee, 2002) is a self-report measure designed to assess a wide range of negative self-statements in children and adolescents. The CATS assess negative beliefs across both internalising and externalising difficulties in children and adolescents.
Participants are asked to rate the frequency with which they have experienced each negative belief over the past week on a five-point Likert scale ranging from “Not at all” (0) to “All of the time” (4). The items form four separate subscales of cognitive content comprising of 10 items each: Physical Threat, Social Threat, Personal Failure, and Hostility (not included in this study). The ratings for each item were summed to provide a Total score for all 30 items (maximum = 120), with high scores reflecting a greater frequency of negative automatic thoughts.

Schniering and Rapee (2002) report excellent internal consistency of Cronbach’s $\alpha = 0.95$ using a community sample of 762 children and adolescents. This result has also been mirrored for clinically anxious children (Schniering & Lyneham, 2007). Furthermore, Schniering and Rapee (2002) report high internal consistency of the subscales, with $\alpha = .85$ for Physical Threat, $\alpha = .92$ for Social Threat, $\alpha = .92$ for Personal Failure, and $\alpha = .85$ for Hostility. These results are consistent with those found by Schniering and Lyneham (2007). In the current study, internal consistency for the Total score (comprised of Physical Threat, Social Threat, and Personal Failure) was found to be $\alpha = .96$ and between $\alpha = .87$ and $\alpha = .93$ for the three subscales.

Schniering and Rapee (2002) report test-retest reliability using a subsample of 123 children and adolescents who were reassessed 1 and 3 months after the initial administration of the questionnaire. The test-retest correlation coefficient for the Total score was $r = .79$ at 1 month, and $r = 0.76$ at 3 months, indicating adequate reliability. Test-retest correlation coefficients for subscale scores at 1 month were acceptable at $r = .74$ for Physical Threat, $r = .79$ for Social Threat, $r = .80$ for Personal Failure, and $r = 0.66$ for Hostility. Similarly, test-retest correlations coefficients for subscales at 3 months were also adequate at $r = .77$ for Physical
Threat, $r = .73$ for Social Threat, $r = .74$ for Personal Failure, and $r = .68$ for Hostility.

Further analysis using intraclass correlation coefficients ranged between $r = .87$-$r = .91$ for all subscales and for the Total score. Several factor analyses also support a hierarchical four factor model with a single higher order factor (Schniering & Rapee, 2002, 2004b; Schniering & Lyneham, 2007).

Evidence for discriminant validity has been demonstrated, with initial investigations revealing that scores on the CATS can discriminate between control and clinical children and adolescents, and between clinical subgroups on the relevant subscales (Schniering & Rapee, 2002). Furthermore, both the Total CATS score and subscale scores have been shown to distinguish between children who had anxiety disorders only, those who had anxiety and a comorbid mood disorder and those who had anxiety and a comorbid behavioural disorder (Schniering & Lyneham, 2007).

Convergent validity has been examined by using Pearson’s correlations with other self-report measures of anxiety, depression, and behavioural symptoms as reported by both child and parent. Schniering and Lyneham (2007) found strong correlations between child reports of anxiety and depression symptoms and the corresponding CATS subscales and Total score. The correlation between the CATS Hostility scale and the anxiety/depression symptom measures was moderate. Correlations with parent reports were moderate, in particular with significant relationships between: (a) the Social Threat, Personal Failure and Total CATS scores and parent report of internalising behaviours, and (b) between the Hostility subscale and parent report of externalising behaviours.

More specifically, both the Social Threat Subscale and Physical Threat have been found to be significantly correlated with the Spence Children’s Anxiety Scale
(SCAS; Spence, 1998) Total score. Conversely, the Hostility Scale has been found to be significantly correlated with scores on the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) (Farrugia & Hudson, 2006). Furthermore, the Total CATS score has also been found to correlate with Total scores on the SCAS, SDQ, and the Life Interferences Measure (LIM; Lyneham, Abbott, & Rapee, 2003). In another study the Total CATS score, as well as the Physical Threat and Personal Failure subscales were significantly correlated with Total score of the Children’s Yale-Brown Obsessive Compulsive Scale and Obsessions Scale (CY-BOCS; Goodman, Price, & Rasmussen, 1989) (Verhaak & de Haan, 2007).

Clinical sensitivity to change has also been demonstrated in two studies. An early intervention pilot program for depression showed significant reductions in overall CATS Total score, as well as specific significant reductions in thoughts on the Physical Threat and Personal Failure subscales (Kowalenko et al., 2005). These results were improved upon in a subsequent intervention in a sample of adolescent girls, with results indicating a statistically significant decrease in all CATS subscales (Wignall, 2006).

6.1.2.5. Psychosocial Functioning

Several indices were used to assess psychosocial functioning across a variety of domains, including depression, anxiety, self-esteem, parent and peer attachment, anger, coping, and locus of control. The instruments used to measure these concepts are detailed below.

6.1.2.5.1. Reynolds Adolescent Depression Scale – 2nd Edition

The Reynolds Adolescent Depression Scale (RADS-2; Reynolds, 2002) is a self-report measure designed to evaluate depressive symptomatology in
adolescents. The RADS-2 consists of 30 items rated on a four-point Likert scale from “Almost Never” (1) to “Most of the Time” (4). Raw scores range from 30 – 120 and are summed and converted to provide standard T-scores ($M = 50$, $SD = 10$) and percentile ranks for Total depression and each of four subscales: Dysphoric Mood (8 items, e.g., “I worry about school”), Anhedonia/Negative Affect (7 items, e.g., “I feel happy”), Negative Self-Evaluation (8 items, “I feel my parents don’t like me”), and Somatic Complaints (7 items, e.g., “I feel sick”). The item content is designed to reflect DSM-IV-TR (American Psychiatric Association, 2001) criteria for depression.

The RADS-2 was standardised on three groups of 1,100 adolescents, stratified by gender, age, and ethnicity to reflect the 2000 U.S. Census. A considerable amount of evidence is provided in the professional manual for the psychometric properties of the RADS-2 and these will be briefly summarised. With respect to reliability, internal consistency estimates for the RADS-2 based on a school sample of over 9,000 students is reported to be high on the Depression Total scale ($\alpha = .93$), moderately high ($\alpha = .80 - \alpha = .87$) for the subscales, and moderately high ($\alpha = .80 - \alpha = .87$) for males and females. Test-retest reliability over two weeks using 1750 students was determined to be high for the Depression Total scale ($r = .85$), and moderately high for the subscales ($r = .82$). In this study, internal consistency using Cronbach’s alpha for the total score was $\alpha = .94$ and between $\alpha = .68$ and $\alpha = .89$ for the subscales.

Validity data on the RADS-2 includes evaluation of content, criterion-related, convergent, discriminant, and clinical validity analyses. Content validity was assessed on a standardisation sample of 3,300 adolescents through item-with-total Depression Total scale coefficients, and was considered to be adequate (median $r = .53$). Similarly, the median item-with-total correlation coefficients for the four
subscales were also considered to be high and ranged from $r = .53$ to $r = .66$. The RADS-2 manual also reports high criterion validity as indicated by correlations between the RADS-2 and the Hamilton Depression Rating Scale (HDRS; Hamilton, 1960) ($r = .82$) and the Adolescent Psychopathology Scale subscales (APS; Reynolds, 1998a) ($r = .74$ to .76), the Minnesota Multiphasic Personality Inventory - Adolescent (Butcher et al., 1992) ($r = .78$), and the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) ($r = .80$). Convergent validity of the RADS-2 has been demonstrated with measures of related constructs including self-esteem, anxiety, and suicidal behaviors.

RADS-2 discriminant validity was evaluated by comparing with scales of social desirability, IQ, conduct disorder, substance abuse, and mania. Correlations between the RADS-2 and these scales was determined to be relatively low. For instance, the RADS-2 Total Score correlated $r = -.21$ with a measure of social desirability, $r = .12$ with a measure of IQ, and for measures of conduct disorder, substance abuse and mania, $r$'s ranged between $r = .22$ and $r = .32$.

RADS-2 convergent validity has been demonstrated by examining relationships between the RADS-2 and measures such as self-esteem, anxiety, and suicidal behaviors. More specifically, a range of correlations have been found between the RADS-2 and the APS (Reynolds, 1998) anxiety disorder subscales: Panic Disorder ($r = .56$), Obsessive Compulsive Disorder ($r = .49$), Generalised Anxiety Disorder ($r = .63$), Social Phobia ($r = .55$), Separation Anxiety ($r = .37$), and Posttraumatic Stress Disorder ($r = .70$). Significant correlations have also been found for the RADS-2 total score with total scores on the Suicidal Behaviors Interview (SBI; Reynolds, 1990) and Suicidal Ideation Questionnaire (Reynolds, 1988) ($r = .56$ and $r = .68$, respectively), on the Revised Children's Manifest Anxiety Scale (RCMAS;
Reynolds & Richmond, 1978) \( (r = .77) \), Rosenberg Self-Esteem Scale (Rosenberg, 1965) \( (r = -.72) \), and the Beck Hopelessness Scale (Beck & Steer, 1998) \( (r = .60) \).

Finally, the RADS-2 manual cites support for contrasted clinical groups validity with a difference of over two standard deviations \( (SD = 2.19) \) in standard scores between a clinical sample of adolescents with depression and a school-based control group.

6.1.2.5.2. Revised Manifest Anxiety Scale for Children

The Revised Children's Manifest Anxiety Scales (RCMAS; Reynolds & Richmond, 2000) are designed to assess the level and nature of anxiety in children and adolescents aged 6 to 19 years. The RCMAS contains 37 items comprising four scales: Physiological Anxiety (10 items; e.g., "Often I feel sick in my stomach."), Worry/Over-sensitivity (11 items; e.g., "I worry about what is going to happen."), Social Concerns/Concentration (7 items; "A lot of people are against me."), and the Lie Scale (9 items; e.g., "I never get angry."). Participants respond to each question with a "Yes" or "No" answer. "Yes" indicates the item is descriptive of the participants' feelings or behavior. The "Yes" responses to items from the first three subscales are summed to determine a Total Anxiety score. A score of 14 or more on the Lie subscale indicates an inaccurate self-report and thus such profiles were excluded from the analyses \( (N = 293) \). The raw scores are summed and converted to provide standard T-scores \( (M = 50, SD = 10) \) and percentile ranks for the Total Anxiety scores and each of four subscales.

The RCMAS was normed on 4,972 children aged between of 6 and 19 years (2208 White males; 2176 White females; 289 Black males, 299 Black females). Coefficient alpha reliabilities have been reported in the manual for the RCMAS Total.
Anxiety score for white males, black males, white females, and black females at 12 age levels (age 6 to 17-19). For the entire age range, reliability estimates were $\alpha = .84$ for white males, $\alpha = .85$ for black males, $\alpha = .85$ for white females, and $\alpha = .78$ for black females. Reliability estimates based on the standardization sample have also been reported for the anxiety subscales. For the Physiological Anxiety subscale, alpha reliability estimates were generally found to range between $\alpha = .60$ and $\alpha = .80$, except above age 15, where reliabilities are reported to be in the mid .50s. The Worry/Oversensitivity subscale reliability estimates were reported to be between $\alpha = .76$ and $\alpha = .81$, $\alpha = .60$ and $\alpha = .73$ for the Social Concerns subscale, $\alpha = .60$ and $\alpha = .80$ for the Lie subscale. In the current study, internal consistency estimated using Cronbach's alpha was found to be $\alpha = .90$ for the Total score, and ranged between $\alpha = .72$ and $\alpha = .85$ for the subscale scores.

With respect to test-retest reliability, Reynolds (1981) reported a correlation coefficient of $r = .68$ for the Total Anxiety score and $r = .58$ for the Lie subscale for 534 primary school children tested nine months apart. Even stronger evidence for test-retest reliability was offered by Pela and Reynolds (1982), who using a 3-week interval, reported a correlation of $r = .97$ for the Total Anxiety score for primary school-aged boys, $r = .98$ for girls, and $r = .98$ for the combined group.

Reynolds (1980) examined the convergent and divergent validity through the concurrent administration of the State-Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973), an accepted measurement of state and trait anxiety. A high, significant correlation was found between the RCMAS and the STAIC Trait scale ($r = .85$), whereas a significant low correlation was found for the STAIC State scale ($r = .35$). In a similar study by Reynolds (1985) using a sample of 465 children of above average intelligence, the RCMAS Total Anxiety score was correlated $r = .78$ with the
STAIC Trait scale and only .08 with the STAIC State scale. Given that the RCMAS was derived from a theory of trait anxiety, these results support the divergent validity of the scale. Further attesting to the scales’ divergent validity, no correlation has been found between the RCMAS Total score or subscales and IQ (Reynolds, 1982).

Convergent validity was supported by the results of a large study by Reynolds (1982), in which a small correlation was found ($r = .29$ for females, $r = -.21$ for males) between the Total RCMAS score and problem behaviour, as measured by the Walker Problem Behaviour Identification Checklist (WPBIC, Walker; 1971). The Social Concerns/Concentration subscale was the most closely related to teacher-observed behaviour problems, but only for females. Correlations of $r = .39$, .53, and .35 were obtained between the Social Concerns/Concentration subscale and Acting-out, Distractibility, and Disturbed Peer Relations scales of the WPBIC, respectively. For males, the Physiological Anxiety subscale was most closely related to observed behaviour.

Finally, several factor analytic studies have confirmed the construct validity of the RCMAS anxiety subscales (e.g., Reynolds & Harding, 1983; Reynolds & Paget, 1981; Reynolds & Richmond, 1979). However, several studies have found that the Lie subscale divides into two factors (Reynolds & Paget, 1981; Paget & Reynolds, 1984; Reynolds & Scholwinksi (1985), named Lie 1 and Lie 2 by Reynolds and Paget (1981). Comprised of only thee of nine lie items, Reynolds and Richmond (2000) propose that items on the Lie 2 scale “present confusing concepts that may account for the distinctive response pattern to these items” (p. 32).

6.1.2.5.3. Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) is a measure that wasdesigned specifically to assess global self-esteem in adolescents. The scale
consists of ten items rated on a four-point likert scale from (1) Strongly Agree to (4) Strongly Disagree. Scores are summed after reverse scoring five positively worded items to provide a total score ranging from 10 to 40, with higher scores reflecting higher levels of self-esteem. There are no established cut-off scores to indicate high and low self-esteem.

The original normative sample consisted of 5,024 junior and senior highschool students from ten randomly selected schools in New York (Rosenberg, 1965). Based on this sample, Cronbach’s alpha was calculated to be .77. In a meta-analysis consisting of 105 studies that included studies that used differing versions of the Rosenberg Self-Esteem Scale, Cronbach’s alpha was reported to be .85 (Kling, Hyde, Showers, & Buswell, 1999). Other individual studies using the original version of the scale have reported Cronbach’s alphas of .88 (Cole, Protinsky, & Cross, 1992; Feldman, Fisher, Ransom, & Dimiceli, 1995). Convergent validity has been demonstrated for the Rosenberg Self-Esteem Scale through positive correlations with related constructs, such as confidence \( r = .65 \), popularity \( r = .39 \), and general academic self-concept \( r = .38 \), and with the Coopersmith Self-Esteem Inventory \( r = .55 \) (Robinson, Shaver, & Wrightsman, 1991). Discrimant validity of the Rosenberg Self-Esteem Scale has been shown through lack of significant association with academic grade, locus of control, verbal and quantitative Scholastic Aptitude Test scores, gender, age, work experience, marital status, birth order, and vocabulary (Robinson et al., 1991).

6.1.2.5.4. Inventory of Parent and Peer Attachment – Short Form

The Inventory of Parent and Peer Attachment – Short Form (IPPA-SF; Nada-Raja, McGee & Stanton, 1992) is based on the full measure devised by Armsden and Greenberg (1987). The original IPPA was based on Bowlby’s attachment theory,
and was originally designed to investigate adolescents’ perceptions of relationships with their parents and close friends – particularly how well these individuals serve as sources of psychological security.

The IPPA-SF is a self-report questionnaire consisting of 24 items rated on a five-point Likert-Scale ranging from “Almost never or never true” (1) to “Almost always or always true (5)”. The IPPA items form two summary scales to represent parent and peer attachment, respectively. The 12 items in each section form three subscales consisting of three items each that assess three broad dimensions of attachment: degree of mutual trust, quality of communication, and extent of anger and alienation. As recommended by Armsden and Greenberg (1987), items for parent and peer attachment are considered and scored separately. Scores for the summary scales range from 12 – 60, with higher scores reflecting higher levels of perceived attachment.

A considerable amount of research has attested to the psychometric validity of the IPPA. Armsden and Greenberg (1987) reported internal consistency estimates for the three parent attachment subscales. Cronbach’s coefficient alphas were .91 for the trust subscale, .91 for the communication subscale, and .86 for the alienation subscale. Comparable reliability estimates were reported for the peer attachment subscales (.91, .87, and .72, respectively). With respect to test-retest reliability, Armsden and Greenberg (1987) reported reliabilities of $r = .93$ and $r = .86$ for parent and peer attachment over a three-week interval. With respect to validity, Armsden and Greenberg (1987) found the IPPA to be related to other conceptually similar measures, such as the Family Self-Concept ($r = 0.78$ with parent attachment; $r = 0.28$ with peer attachment) and Social Self-Concept ($r = 0.46$ with parent attachment; $r = 0.57$ with peer attachment) subscales of the Tennessee Self-Concept Scale.
(TSCS; Fitts & Warren, 1996) and to several subscales of the Family Environment Scale (FES; Moos & Moos, 1986). Specifically, parent attachment was positively correlated with Cohesion \((r = 0.56)\), Expressiveness \((r = 0.52)\) and Organization \((r = 0.38)\), and was negatively related to Conflict \((r = -0.36)\) and Control \((r = -0.20)\).

Due to time restraints, a short form of the IPPA was used in the current study. The short form was developed by Nada-Raja et al. (1992) and was based on psychometric information provided by Armsden and Greenberg (1987). The communication, trust, and alienation subscales were shortened by including the four items with the highest item-total correlation coefficients within each subscale, for both parents and peers. Except for the alienation subscale (for both parent and peer attachments), the majority of the item-total correlation coefficients were greater than \(r = 0.40\). As a result, the IPPA short form contains 24 of the original 53 items.

Psychometric information relating to the short form of the IPPA is limited, with only one published study by Nada-Raja et al. to have utilized the shortened measure. Internal consistency coefficient alpha for the parent and peer scales have been reported, with \(\alpha = 0.82\) and \(\alpha = 0.80\), respectively (Nada-Raja et al., 1992). Total scores for each subscale also correlated significantly \((r = 0.36)\). Furthermore, intercorrelations amongst the parent and peer subscales were all significant and positive, ranging from \(r = 0.44\) to \(r = 0.67\) for the parent subscale, and between \(r = 0.27\) and \(r = 0.68\) for the peer subscale. In the current study, internal consistency using Cronbach’s alpha indicated reliabilities of \(\alpha = 0.88\) and \(\alpha = 0.85\) for the parent and peer subscales, respectively.

Convergent validity for the IPPA-SF has been demonstrated by Nada-Raja et al. (1992) with a positive relationship found between low perceived attachment to parents and more problems of conduct, inattention, depression, and frequency of
reported negative life events. Conversely, poor mental health status (inattention and conduct problems) was found to be associated with low parent attachment, and adolescents’ perception of their strengths and weaknesses was found to be associated with both parent and peer attachment.

6.1.2.5.5. School Connectedness Scale

The School Connectedness Scale (Resnick et al., 1997) contains six questions that tap into aspects of connection to school. Three questions relate to social belonging (“You feel close to people at your school,” “You feel like you are part of your school,” and “You are happy to be at your school”). Responses to the first three questions are recorded on a five-point Likert-type scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (5). A further three questions explored participants’ perceptions of their teachers. The first of these questions asked students to report how much they agreed or disagreed with the statement, “The teachers at your school treat students fairly.” Response categories ranged from “Strongly Disagree” (1) to “Strongly Agree” (5). A second question asked, “Since school started this year, how often have you had trouble getting along with your teachers?” The five response categories were “Never,” (1) “Just a few times,” “About once a week,” “Almost every day,” and “Every day” (5). Responses to this question were reverse-coded. The third question was “How much do you feel that your teachers care about you?” The five response categories were “Not at all,” (1) “Very little,” “Somewhat,” “Quite a bit,” and “Very much” (5).

Internal consistency for the six items has been reported, with Cronbach’s $\alpha = .76$ (Henrich, Brookmeyer, & Shahar, 2005). In the current study, internal consistency was $\alpha = .78$. 
McNeely and Felci (2004) report that the social belonging measure had excellent reliability for a three-item scale ($\alpha = .78$). The teacher support scale had average reliability ($\alpha = .63$), which they believed was due to the two scale items assessing students’ individual relationship with their teachers, whereas the third item assessed how teachers treat all students in the school. A moderate correlation was observed between the two measures of school connectedness ($r = .43$).

6.1.2.5.6. Adolescent Anger Rating Scale

The Adolescent Anger Rating Scale (AARS; Burney, 2001) is a 41-item, self-report scale designed to assess anger expression and anger control in adolescents aged 11 to 19 years. The AARS requires participants to provide answers to items using a four-point Likert-scale ranging from “Hardly Ever” (1) to “Very Often” (4) to best describe their behaviour when angry.

The AARS contains four subscales, Reactive Anger (RA), Instrumental Anger (IA), and Anger Control (AC). RA is defined as “an immediate angry response to a perceived negative, threatening, or fear-provoking event” (Burney, 2001, p. 8). Items included on the RA subscale (8 items) assess the frequency of behaviors such as acting without thinking, having a hot temper, talking loudly, and having difficulty controlling one’s temper. Adolescents with reactive-type anger are usually retaliatory, impulsive, and their cognitive processing is usually characterised by hostile attribution errors.

IA is defined as “a negative emotion that triggers a delayed response resulting in a desired and planned goal of revenge and/or retaliation” (Burney, 2001, p. 7). Items on the IA subscale (20 items) assess instrumental-type anger reactions such as cheating, bullying others, planning to fight, running away, planning to destroy
property, and getting into trouble with the police. This type of anger usually motivates goal-directed behaviour (e.g., an adolescent may learn that acts of aggression can achieve social status and material gain).

AC is defined as “a proactive cognitive/behavioral method used to respond to reactive and/or instrumental provocation” (Burney, 2001, p. 9). AC subscale items (13 items) measures an adolescents’ capacity to proactively resolve anger-provoking situations. For example, items assess the frequency of behaviors such as trying to work problems out, having self-control to walk away to avoid a fight, planning how to talk nicely to avoid arguing, and ignoring others when put down.

Finally, the Total Anger score is based on the responses on all 41 items of the AARS. Scores for the Total Anger and subscale scores are summed and converted to provide standard T-scores ($M = 50, SD = 10$) and percentile ranks.

The AARS manual states that norms were based upon a sample of 4,187 ethnically diverse adolescents from inner city, urban, and suburban settings across the United States. The sample was divided into middle school (grades 6 to 8, ages 11 to 14) and high school participants (grades 9 to 12, ages 14 to 19).

The manual provides extensive information to attest to the scales’ psychometric properties. With respect to reliability, internal consistency for the total standardization sample, $\alpha = .92$, with internal consistency for the subscales ranging from $\alpha = .81 - .92$. Test-retest reliability over a 2-week interval was $r = .73$ for the Total score, and ranged between $r = .71$ and $r = .74$ for the subscales. In this study, internal consistency using Cronbach’s alpha was .78 and ranged between $\alpha = .46$ and $\alpha = .72$ for the three subscales.

Regarding validity, three types of validity, including content, criterion, and construct validity, is reported in the professional manual. To demonstrate content
validity, Burney (2001) used a three tiered stepwise approach. First, a panel of eight professionals who work with adolescents in various capacities assessed the appropriateness and refined test items where necessary, and identified items they believed should be included in the final item pool. Next, the panel members completed an Item Development Questionnaire to assess the relevance and face validity of the AARS. Once this process was completed, individual panel members classified each item to an appropriate subscale (i.e., instrumental or reactive anger). As a group, the members then worked to achieve majority consensus of 60% or higher on item assignment. The final step to achieve content validity required each panel member to complete a Validation Response Survey to determine content relevancy, applicability, and practicality of the AARS. All panelists agreed the instrument fulfilled all three requirements.

Criterion validity was assessed by examining concurrent validity of the AARS with the number of conduct referrals (or school disciplinary referrals) and the number of instrumental and reactive anger-type conduct referrals. Instrumental anger-type referrals included cheating on tests, skipping class, and threatening teachers, whereas fighting, swearing, and oppositional defiance are classified as reactive anger-type referrals. Low positive correlations were found between IA subscale scores and number of instrumental anger-type referrals ($r = .18$), and a positive correlation was found between the RA subscale scores and number of anger-type conduct referrals ($r = .20$). A moderate negative relationship was found between Anger Control scores and the number of conduct referrals ($r = -.36$). Finally, the Total Anger score was found to be related to all types of referral ($r$'s ranged from .27 - .30).

Construct validity was examined by evaluating the factor structure of the AARS, convergent validity, discriminant validity, and group comparisons.
In examining the structure of the AARS items, Burney (2001) conducted an exploratory factor analysis and identified a three-factor structure: Instrumental Anger, Anger Control, and Reactive Anger. She further concluded that these results "are consistent with previous research (e.g., Burney & Kornrey, 2001) assessing the three-factor structure of the AARS." (p. 32)

Convergent validity was evaluated by calculating correlations between the AARS and two subscales of the Conners-Wells Adolescent Self-Report Scales-Long Version (CASS-L; Conners, 1997): Anger Control Problems (ACP) and Conduct Problems (CP). High positive correlations were demonstrated between RA and ACP \( (r = .61) \) and between IA and CP \( (r = .57) \). In addition, lower negative correlations were found between AC and ACP \( (r = -.24) \) and between AC and CP \( (r = -.11) \). However, statistical significance of these correlations was not reported.

With respect to discriminant validity, the AARS manual cites moderate correlations between the Multidimensional Anger Inventory (MAI; Siegal, 1986) and the IA and RA subscales \( (r = .46 \) and \( r = .44 \), respectively). Additionally, a low negative correlation was reported between the MAI and the AC subscale \( (r = -.11) \) (Burney, 2001). According to Burney (2001), this was expected since the AARS and the MAI subscales measure different, unique aspects of anger and that the MAI and the Anger Control Subscale measure entirely different constructs (Burney, 2001).

6.1.2.5.7. Adolescent Coping Strategy Index

The Adolescent Coping Strategy Index (ACSI) was adapted by Parada (2006) based on the Coping Strategy Indicator (Amirkhan, 1990), a measure of three forms of general coping strategies used by adults. Based on preliminary pilot work, Parada (2006) shortened the original 36-item version to 15 items (see Parada, 2006 for a discussion of pilot work carried out). The three coping strategies commonly used by
adolescents that were measured by the ACSI were Active Problem Solving (5 items), Social Support Seeking (4 items), and Problem Avoidance (6 items). A stem statement “When I have a problem…” preceded the 15 items describing various ways of dealing with problems. Participants rated how they respond to problem they confront on a six-point Likert Scale from “Never” (1) to “Always” (6). Total scores for Active Problem Solving range from 5 to 30, 4 to 24 for Social Support Seeking, and 6 to 36 for Problem Avoidance. Higher scores on one or more of the scales reflect higher usage of the particular coping style. It is important to note that the instrument related to coping with problems in general and not to coping with bullying behaviours.

Psychometric properties reported by Parada were based on a sample of 3522 high school students ranging between 11 to 17 years of age. Parada (2006) reports internal reliability estimates for the total sample of students, with internal consistency estimates ranging between $\alpha = .75 - .90$, with a median of $\alpha = .86$. The Avoidance scale had the lowest reliability coefficient, although it was still acceptable $\alpha = .75$. The reliability estimates were only slightly different for boys and girls (median $\alpha = .86$ for boys and .84 for girls; mean $\alpha = .83$ for both boys and girls). In the current study, internal consistency estimates for the three scales ranged between $\alpha = .79$ and $\alpha = .89$. Furthermore, Parada (2006) investigated the factor structure of the coping index using Confirmatory Factor Analysis. The results of this analysis indicated that the three-factor model of coping provided an excellent fit for the data, and this was supported for both boys and girls. Correlations among the factors ranged from $r = .01$ to $.46$ (mean $r = .11$; median $r = -.13$), providing strong support for the distinctive nature of each of the factors. The highest correlations were between factors representing active problem solving styles: Problem Solving and Seeking Support ($r$
The correlation between the factors representing avoidance and active coping were negative: avoidance and seeking support \((r = -.01)\) and avoidance and problem solving \((r = -.13)\).

### 6.1.2.5.8. Locus of Control Index

The Locus of Control Index (LOCI) was developed by Parada (2006) to measure the extent to which students attribute their success or failures in daily living to internal (e.g., effort) or external (e.g., luck) factors. The LOCI contains eight items, which are equally divided to form two scales: external locus of control and internal locus of control. Participants were asked to rate how much they agreed or disagreed with items on a six-point Likert scale from “Completely disagree” (1) to “Completely Agree” (6). Possible scores for both scales range from four to 24. Higher scores on either scale reflect more internal or external control, respectively.

Parada (2006) reported good internal consistency estimates for the internal LOC and external LOC \((\alpha = .75\) and \(\alpha = .71\), respectively). In this study internal consistency using Cronbach’s alpha was found to be \(\alpha = .70\) for internal LOC and \(\alpha = .79\) for external. Parada (2006) reported that the reliability estimates for boys and girls were different, with boys being slightly more reliable (mean \(\alpha = .74\)) than the girls (mean \(\alpha = .72\)). The lowest reliability for both boys and girls was in the external LOC scale \((\alpha = .70\) and \(\alpha = .71\), respectively). A Confirmatory Factor Analysis was performed to demonstrate a two a priori factor structure of the Locus of Control Index, with results indicating that the two-factor model for the Locus of Control index provides an excellent fit for the data, and this was supported for both boys and girls. The factor correlation between the two factors of the LOCI \((r = -.11)\) was small and negative and provides support for the distinctive nature of each of the factors.
Approval for the research was obtained from the RMIT Human Research Ethics Committee (ASETAPP 75 – 07). Approval was sought from the Department of Education and Training, however the project was rejected on the grounds of the length of the questionnaire package, questions referring to self-harm, and concern that bullies and victims would be ‘labeled’, leading to stigmatisation. Over eight months, several representations were made to the Department of Education countering the formally stated reasons for the project’s rejection. Each attempt at addressing the Department’s concerns was met with vague responses, and the project’s approval status remained as ‘rejected’. The response time taken to receive feedback from the Department of Education after each representation was made ranged between two to five months. Moreover, the author made numerous calls (approximately 20 over a three month period) to determine the status of the application, and calls were never returned. Based on these events, it was concluded that the Department of Education did not desire the study to proceed. Therefore, participants were sought from non-government schools. Given the resultant time pressures, school principals were approached from two independent schools (School A and School B) with multiple campuses and substantial enrolments. These principals were overwhelmingly in favour of the study and provided their full support in encouraging the implementation of the research within their schools. As a consequence, meetings were arranged with respective welfare coordinators and year-level teachers to discuss the operationalisation of data collection.

Plain Language Statements (guardian and participant versions) and Consent Forms (See Appendices B and C) and were sent home with all students ranging from
Year 7 to 11 (Year 11 students at School A were not approached as they were completing exams at the time of data collection).

The method of recruiting classes differed slightly between the two schools as a function of differential principal preferences. In order to recruit classes from School A, a presentation to teachers and staff during a regular afterschool meeting to outline the project’s rationale, aim, and methods of data collection. Teachers who were interested in having their class(es) participate in the study nominated their name, e-mail address, work phone number, class number, room location, and suitable class times. Teachers were then contacted individually to confirm times for the researcher to enter the nominated class and administer the questionnaire. Thirty-two classes were recruited from School A. The administration of the questionnaire was attended by the principal researcher, who ensured the corrected completion of the questionnaire package.

In order to recruit classes from School B, the principal required that the school welfare co-ordinator contacted teachers individually to discuss the project and determine their interest in taking part. Given that Term 4 exams were one week away, it was decided that there would not be adequate time to administer the questionnaire to classes one at a time. Therefore, a decision was made to administer the questionnaire en-masse across Years 7 - 11 over two days in the schools large study hall. Twenty-three classes were recruited from School B. Consistent the methodology utilised for School A, the principal researcher attended questionnaire administrations. In addition, School B’s psychologist, welfare officer, and classroom teachers were also involved in overseeing the completion of the questionnaire package across various classes.
Questionnaire packages were completed in groups during regular class time. No actual time restraint was imposed on the students; however, on average students took 45 minutes to complete the questionnaires. Participants were informed that they could ask questions if they did not understand any part of the surveys, and that they could also withdraw from participating in the study at any point. It was emphasized to the participants that the questionnaires were anonymous, and that only the researcher would access the questionnaire. Following completion of the questionnaire, participants were debriefed and given an opportunity to ask questions about the research. Each participant was also given a sheet listing several individuals and organizations that they could contact if they wanted to discuss any distress arising from the completion of the questionnaire (See Appendix D). Each participant’s responses were entered and analysed using Statistical Package for the Social Sciences (SPSS) version 17.0 for Windows (SPSS, 2008).

A feedback session, presented to teachers and administration, was negotiated with each school following the completion of the project. In this session, a summary of the research findings was presented, and discussion then focused on the implications for that school’s bullying minimisation program.
7. CHAPTER 7

7.1. Results

Prior to analysing the data, all variables were examined using frequency distributions for accuracy of data entry and missing values. Exploratory data analyses involving visual inspection of stem-and-leaf and normality plots, and assumptions testing procedures were performed on all scale measures to ensure that there were no obvious or serious violations of the assumptions underlying parametric procedures; specifically, normality, linearity, and homogeneity of variance. There were no serious violations of the assumptions noted for any of the variables and all were deemed suitable for parametric analysis. An alpha level of 0.05 was used for all statistical analyses, unless otherwise stated.

The results are presented firstly in terms of the frequency of bullying, including the frequency of various types of bullying, responses to bullying, and psychosocial characteristics. This is followed by analyses that aim to address the research questions previously outlined. This includes an analysis of the accuracy with which participants could identify themselves within the bully/victim cycle (using Cohen’s Kappa), an analysis of the two types of cognitive distortions that are hypothesised to differentiate between bullies and victims, and exploration of the cognitive distortions of those who are both bully and victim (Using one-way ANOVA and logistic regression). An examination of cognitive distortions is taken to further determine whether cognitive distortions mediate the relationship between bullying/victimisation and psychosocial functioning, in both ‘Real World’ and ‘Cyber World’ contexts (using bootstrapping). Comparisons are drawn between victims of dual modalities of bullying (i.e., ‘Real World’ and ‘Cyber World’) and victims of single modality bullying (i.e., ‘Real World’ only) to determine any differences in psychosocial functioning.
(using t-tests). Finally, the moderating role of gender is analysed (using bootstrapping) to explore whether it has an impact on the psychosocial functioning of bullies, victims, and bully/victims.

7.1.1. Bullies, Victims, Bully/Victims, and Non-Involved Participants: Classification and Frequency

The first step in data analysis was to classify participants into four bully/victim domains: bullies, victims, bully/victims, and non-involved participants. Participants were classified as bullies or victims if they reported perpetrating, or experiencing, respectively, an act of bullying at least ‘two or three times a month’ or more. Participants who experienced both bullying and victimisation at this frequency or higher were classified as Bully/Victims. Those perpetrating, or experiencing respectively, an act of bullying ‘once or twice’ or less were classified as ‘non-involved’ participants. This same classification system was used to classify those involved in cyber bullying. The frequency of bullies, victims, bully/victims and non-involved participants of ‘Real World’ and ‘Cyber World’ bullying are shown in Table 1.

The number of participants classified as victims far outweighed the number of participants identified as bullies for both ‘Real World’ and ‘Cyber World’ bullying contexts. Furthermore, with the exception of cyber bullying, more males than females were involved in bullying in general (either as bullies, victims, or both), although this difference was exacerbated amongst ‘Real World’ bullies and both ‘Real World’ and ‘Cyber World’ bully/victims, with more than double the proportion being male. These proportions are consistent with those previously reported in the literature (Bosworth, 1999; Boulton & Underwood, 1992; Olweus, 1994). However, compared to past studies, the proportion of students in this study who were classified as bullies was relatively small.
Table 1.

Frequency of ‘Real World’ and ‘Cyber World’ Bullies, Victims, Bully/Victims, and Non-Involved Male and Female Participants

<table>
<thead>
<tr>
<th>Type &amp; Status</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td><strong>Real World</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bully</td>
<td>38</td>
<td>67.9</td>
<td>18</td>
</tr>
<tr>
<td>Victim</td>
<td>128</td>
<td>53.8</td>
<td>110</td>
</tr>
<tr>
<td>Bully/Victim</td>
<td>42</td>
<td>71.2</td>
<td>17</td>
</tr>
<tr>
<td>Not-Involved</td>
<td>341</td>
<td>46.9</td>
<td>386</td>
</tr>
<tr>
<td><strong>Cyber World</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bully</td>
<td>8</td>
<td>50.0</td>
<td>8</td>
</tr>
<tr>
<td>Victim</td>
<td>20</td>
<td>45.5</td>
<td>24</td>
</tr>
<tr>
<td>Bully/Victim</td>
<td>9</td>
<td>69.2</td>
<td>4</td>
</tr>
<tr>
<td>Not-Involved</td>
<td>506</td>
<td>50.9</td>
<td>489</td>
</tr>
</tbody>
</table>

N = 1080  \quad N = 1068

Similarly, the proportion of students in this study who reported being involved in cyber bullying was relatively low compared to past findings (Hinduja & Patchin, 2008; Williams & Guerra, 2007; Ybarra & Mitchell, 2004b).

7.1.2. ‘Real World’ Victimisation and Bullying

7.1.2.1. Types of Victimisation in the ‘Real World’

The ROBVQ assessed several types of victimisation. The frequencies of the various forms of victimisation as they occurred in this study are presented in Table 2.

The most common types of victimisation occurred through verbal bullying and social exclusion. Others forms of victimisation were relatively low in prevalence, with rumour spreading and ability bullying being the next common (3.7% and 2.7%, respectively), and the least common being religious (0.3%) and disability bullying (0.3%). However, more than half of victims (57.5%) were subject to multiple forms of victimisation. These proportions are consistent with previously reported data (Theriot et al., 2005).
Table 2.

*Frequencies of the Types of ‘Real World’ Victimisation*

<table>
<thead>
<tr>
<th>Type of victimisation</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal victimisation</td>
<td>55</td>
<td>18.5</td>
</tr>
<tr>
<td>Social exclusion</td>
<td>18</td>
<td>6.0</td>
</tr>
<tr>
<td>Victimisation through lies and false rumours</td>
<td>11</td>
<td>3.7</td>
</tr>
<tr>
<td>Victimisation about general ability</td>
<td>8</td>
<td>2.7</td>
</tr>
<tr>
<td>Physical victimisation</td>
<td>8</td>
<td>2.7</td>
</tr>
<tr>
<td>Racial victimisation</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>Having money or other things taken or damaged</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>Sexual victimisation</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>Threats or being forced to do things</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Mobile phone victimisation</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td>Religious victimisation</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Victimised about disability</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Victimised another way</td>
<td>4</td>
<td>0.4</td>
</tr>
<tr>
<td>Multiple forms of victimisation</td>
<td>171</td>
<td>57.5</td>
</tr>
</tbody>
</table>

*N= 297*

7.1.2.2. *Types of Bullying in the ‘Real World’*

The type of bullying reported by perpetrators was also examined. The reported frequencies for various types of bulling are shown below in Table 3.

The most common forms of bullying were verbal bullying and social exclusion, which is commensurate with the most common types of experiences reported by victims. These results are also consistent with those reported by Bosworth (1999). Bullies, who perpetrated in another way not identified by the questionnaire, reported using computer-based bullying strategies, as well as inappropriately laughing at someone or did not specify how they bullied in another way. Furthermore, consistent with victimisation patterns, a substantial proportion (12.1%) of bullies reported using multiple forms of bullying.
Table 3.

Frequencies of the Types of ‘Real World’ Bullying

<table>
<thead>
<tr>
<th>Type of Victimisation</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal bullying</td>
<td>13</td>
<td>23.2</td>
</tr>
<tr>
<td>Bullying through social exclusion</td>
<td>10</td>
<td>17.8</td>
</tr>
<tr>
<td>Bullying another way</td>
<td>9</td>
<td>16.0</td>
</tr>
<tr>
<td>Physical Bullying</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td>Racial bullying</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Religious bullying</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Bullying about general ability</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Bullying through mobile phones</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Spreading lies and false rumours</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Taking money or other things or damaging possessions</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Threatening or forcing someone to do things</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bullying about someone’s disability</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sexual bullying</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Multiple forms of bullying</td>
<td>21</td>
<td>12.1</td>
</tr>
</tbody>
</table>

n = 56

7.1.2.3. Reporting & Intervening in ‘Real World’ Bullying

Of those who had been classified as victims or bully/victims, 91 respondents (30.6%) reported that they had not told anyone about their experiences and 157 (52.9%) indicated that they had told someone. These proportions are consistent with survey results from the Sheffield Anti-Bullying Project (Whitney & Smith, 1993). The remaining 47 (15.8%) participants who were classified as victims did not believe that they were bullied in the last couple of months and therefore did not respond to this question. Two participants who were classified as victims (0.7%) did not indicate whether they had told anyone if they were bullied.

Victims and bully/victims most commonly told a friend (39.4%), and/or a parent/guardian (33%), followed by a brother or sister (19.9%), another adult (19.5%), and were least likely to tell a teacher (16.8%), and/or someone else (e.g.,
extended family) (10.1%). Furthermore, 11.8% reported that an adult at home once contacted the school to try to intervene, and 6.7% reported that an adult had contacted the school several times.

As part of the ROBVQ, all participants were asked to rate how frequently they perceived that teachers/adults and fellow students tried to stop bullying. The frequencies are detailed below in Table 4.

Table 4.

Student Ratings of Frequency of Teachers'/Adults' and Students' Attempts to Stop Bullying

<table>
<thead>
<tr>
<th>Rating</th>
<th>Teachers/Adults</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Almost Never</td>
<td>124</td>
<td>11.4</td>
</tr>
<tr>
<td>Once in a while</td>
<td>189</td>
<td>17.4</td>
</tr>
<tr>
<td>Sometimes</td>
<td>236</td>
<td>21.7</td>
</tr>
<tr>
<td>Often</td>
<td>274</td>
<td>25.2</td>
</tr>
<tr>
<td>Almost Always</td>
<td>231</td>
<td>19.6</td>
</tr>
</tbody>
</table>

As can be seen in Table 4, the frequency ratings for teachers/adults and students intervening in bullying appears to be inversely related. That is, teachers/adults were more often seen as intervening in bullying, in contrast to students who were seen as less often intervening in bullying. These proportions are consistent with those reported by Theriot et al. (2005). To explore whether there was a difference between perceptions of how often teachers/adults and students attempted to stop bullying, a paired t-test of the mean frequency ratings was conducted. There was a statistically significant difference, \( t(1031)=17.76, p < .001 \), eta squared = .23, indicating a small effect size. This result suggests that
teachers/adults were seen as more often intervening in incidents of bullying than students.

7.1.2.4. Emotional Reactivity to ‘Real World’ Bullying

As part of the ROBVQ, all participants were asked about how they feel when they see a student being bullied. The majority of participants (42.9%) reported that they felt *a bit sorry* for the student, and a further 41% felt *sorry* and *wanted to help*. A minority of participants reported that they *don’t feel much* (10.6%) or that the bullying *is probably what he or she deserves* (2.8%). Twenty-one participants (1.9%) did not respond to this item.

7.1.3. ‘Cyber World’ Victimisation and Bullying

7.1.3.1. Types of ‘Cyber’ Victimisation

The frequency of the various types of cybervictimisation observed in the study are reported below in Table 5.

Table 5.

Frequencies of the Various Types of Cyber Victimisation

<table>
<thead>
<tr>
<th>Type of victimisation</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received threatening or abusive messages through instant messaging</td>
<td>22</td>
<td>37.3</td>
</tr>
<tr>
<td>Received threatening or abusive text messages on mobile</td>
<td>6</td>
<td>10.2</td>
</tr>
<tr>
<td>Received threatening or abusive messages in a chat room</td>
<td>4</td>
<td>6.8</td>
</tr>
<tr>
<td>Received threatening or rude picture/photos/video clips on mobile</td>
<td>4</td>
<td>6.8</td>
</tr>
<tr>
<td>Had nasty or abusive messages written about self on a website</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>Received threatening or abusive emails</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Victimised though multiple forms of cybervictimisation</td>
<td>20</td>
<td>33.8</td>
</tr>
</tbody>
</table>

*n = 59*
As evident from Table 5, the most common form of cybervictimisation was through instant messaging devices. However a substantial proportion of cyber victims were subject to multiple forms of cybervictimisation (33.9%). The least common forms of cyber victimisation occurred through website and email.

7.1.3.2. Actions in Response to ‘Cyber’ Victimisation

Of those classified as cyber victims or cyber bully/victims, the actions taken in response to being cyberbullied can be summarised as follows:

For those bullied through text-messaging, the majority of victims \((n = 9, 64\%)\) reported that they knew the perpetrator, and one person (7%) did not respond. Similarly, for those e-mailed, the majority of participants knew the identity of the perpetrator \((n = 8, 61.5\%)\), and three participants (23%) did not respond. In chatrooms, five participants reported that they knew their perpetrators (46.7%), and five did not respond. With instant messaging, 22 knew who it was from (61.1%), and 12 (32%) did not respond to this question. With regards to website bullying, seven knew who it was from (53.8%), and five (38%) did not respond. With respect to multimedia, four reported knowing the identity of the perpetrator (44.4%), and three (33%) did not respond. Interestingly, despite the potential for a perpetrator to more easily disguise their identity, the majority of victims across most types of bullying, knew the identity of the perpetrator. A more comprehensive analysis of victims’ responses to cyberbullying are tabulated in Appendix E.

7.1.3.3. Types of ‘Bullying in the ‘Cyber World’

With respect to the types of cyber bullying, the frequencies of the types of cyber bullying reported by perpetrators are presented below in Table 6.
Table 6.

Frequencies of the Types of Cyber bullying

<table>
<thead>
<tr>
<th>Type of bullying</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sending someone threatening or abusive messages through instant messaging</td>
<td>3</td>
<td>18.7</td>
</tr>
<tr>
<td>Sending someone threatening or rude pictures/photos/video clips to their mobile phone</td>
<td>3</td>
<td>18.7</td>
</tr>
<tr>
<td>Sending someone threatening or abusive messages in a chat room</td>
<td>2</td>
<td>12.5</td>
</tr>
<tr>
<td>Writing nasty or abusive message about someone on a website</td>
<td>2</td>
<td>12.5</td>
</tr>
<tr>
<td>Sending someone threatening or abusive emails</td>
<td>1</td>
<td>6.3</td>
</tr>
<tr>
<td>Sending threatening or abusive text messages to another student’s mobile</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Multiple forms of cyber bullying</td>
<td>5</td>
<td>31.3</td>
</tr>
</tbody>
</table>

As illustrated in Table 6, the majority of cyber bullying was enacted through multiple forms of bullying, which included combinations such as chatroom and instant messaging \((n=2)\), or chatroom and instant messaging, plus website bullying \((n=1)\), or website and text message bullying \((n=1)\), or using all possible forms cyber bullying \((n=1)\). Cyber bullies who perpetrated using a single type of bullying most commonly used instant messaging and multimedia capacity of phones, followed by chatroom, public website, and email.

7.1.4. Psychosocial Characteristics of Bullies, Victims, Bully/Victims, and Non-Involved Participants

Descriptive statistics for each of the psychosocial variables (depression, anxiety, self-esteem, anger, locus of control, coping, school connectedness, parent and peer attachment) as well as the cognitive distortion variables (self-serving and self-debasing) are presented in Appendix F.

With the exception of scores on self-esteem, scores on internalising psychosocial variables such as depression, anxiety, negative automatic thoughts were noticeably higher among victims and bully/victims compared to bullies and non-
involved students. On these internalising variables, bullies resembled non-involved
students. However, on externalising variables such as anger and self-serving
cognitive distortions, scores for bullies and bully/victims were generally higher
compared with scores of victims and non-involved students. The groups were
generally comparable on school connectedness and parent attachment, although
scores for non-involved students were relatively higher on these two variables.
However, with respect to peer attachment, scores for bullies resembled those of non-
involved students, with scores generally higher than for victims and bully/victims.
Coping styles also varied across groups, with avoidance coping highest among
bully/victims, and social support seeking highest among non-involved students and
bully/victims. Scores for problem solving were generally comparable across all
groups.

Noticeable gender differences were observed for depression, with females
scoring higher on depression than males, especially amongst victims. These results
are consistent with those of previous research (Crick & Dodge, 1996; Hubbard et al.,
2002; Vitaro et al., 2002). Furthermore, females had higher scores of anger, negative
automatic thoughts, and social support seeking across all groups. Males scored
higher scores than females on parent attachment across the groups, especially
among bully/victims. The opposite trend was observed for peer attachment, with girls
scoring higher than boys, especially among bullies and victims.
7.1.5. Identification of Status within the Bullying/Victimisation Cycle

A fundamental question of interest in the present research is whether bullies, victims, bully/victims, and non-involved participants accurately identify their status in the bullying/victimisation cycle. In order to investigate this question, all participants were asked to respond to two questions about their involvement in bullying, prior to any formal definition of bullying being provided. These questions were:

(1) “Do you think you’re a bully?” (2) “Do you think you’re a victim”?

Participants recorded their response as either ‘Yes’, ‘No’, or ‘Maybe’ to each question. Participants’ responses to these questions were compared with their formal classification status derived from their responses on the ROBVQ.

7.1.5.1. Victim Status

The proportions of participants categorised as a function of their ‘actual’ bullying/victimisation status and their ‘self-perceived’ victimisation status are presented below in Table 7.

Table 7.

Proportion of Students Self-Identifying as Victims Compared to Formal Status Classifications

<table>
<thead>
<tr>
<th>Status</th>
<th>Yes</th>
<th>No</th>
<th>Uncertain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Bully</td>
<td>8</td>
<td>14.3</td>
<td>33 58.9</td>
</tr>
<tr>
<td>Victim</td>
<td>123 51.9</td>
<td>39 16.5</td>
<td>75 31.6</td>
</tr>
<tr>
<td>Bully/Victim</td>
<td>35 61.4</td>
<td>8 14.0</td>
<td>14 24.6</td>
</tr>
<tr>
<td>Not involved</td>
<td>64 8.8</td>
<td>491 67.4</td>
<td>173 23.8</td>
</tr>
</tbody>
</table>
As evident in Table 7, only half of victims (51.9%) accurately identified their status as such. The remainder were either unsure (31.6%) or did not think that they were victims (16.5%). The majority of bullies accurately perceived that they were not victims (58.9%), although a significant proportion was also unsure about their status as victims (56%). This pattern was also mirrored for non-involved participants, where the majority accurately perceived that they were not victims (67.4%), but a sizeable proportion were also unsure about their status (23.8%).

A chi-square test was conducted to determine whether there was a significant relationship between students’ perceived status (as bully, victim, bully/victim, non-involved) and their actual status as victims. The results of the test were significant, \( \chi^2(6, N = 1078) = 311.169, p < .001, \ V = .380 \). A cell with a standardised residual of ±2 is considered to be an important contributor to the significant result (Osborn, 2007). Examination of the standardised residuals indicated that the high proportion of victims (standardised residual = 10.2) and bully/victims (standardised residual = 6.5) who nominated themselves as victims, as well as the high proportion of non-involved participants (standardised residual = 5.4) who nominated themselves as non-victims, contributed to the significant result. These results suggest that victims and bully/victims are able to accurately identify themselves as victims (or at least part-victims in the case of bully/victims).

7.1.5.2. Bully Status

The proportions of participants according to actual status and their self-perceived bully status are presented below in Table 8. Only a minority of those classified as bullies perceive themselves as bullies (10.7%). The majority of those classified as bullies either do not view themselves as bullies (41.1%), or are uncertain about their status (48.2%). In contrast, most
victims (61.4%) and non-involved participants (65.6%) accurately perceive themselves as non-bullies; however, approximately one-third are uncertain about their status.

Table 8.

Proportion of Students Self-Identifying as Bullies Compared to Formal Status Classifications

<table>
<thead>
<tr>
<th>Status</th>
<th>Do you think you are a bully?</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Bully</td>
<td>6</td>
<td>10.7</td>
<td>23</td>
</tr>
<tr>
<td>Victim</td>
<td>9</td>
<td>3.8</td>
<td>145</td>
</tr>
<tr>
<td>Bully/Victim</td>
<td>13</td>
<td>22.8</td>
<td>13</td>
</tr>
<tr>
<td>Not involved</td>
<td>23</td>
<td>3.2</td>
<td>476</td>
</tr>
</tbody>
</table>

A chi-square test was conducted to determine whether there was a relationship between students’ perceived status (as bully, victim, bully/victim, non-involved) and their actual status as bullies. The results of this test were significant, $\chi^2(6, N = 1075) = 79.24, p < .001, V = .192$. Examination of the standardised residuals indicated that the high proportion of bullies (standardised residual = 2.1) and bully/victims (standardised residual = 6.3) who nominated themselves as bullies, as well as the high proportion of bully/victims who were uncertain about their status as bullies (standardised residual = 2.6) contributed to the significant result. These results suggest that bullies and bully/victims are able to accurately identify themselves as bullies (or at least part-bullies in the case of bully/victims), although comparison of the standardised residuals between bullies and bully/victims suggests that a greater proportion of bully/victims identify themselves as bullies than ‘pure’ bullies. However there are also a substantial proportion of bully/victims who were unsure about their status as bullies.
7.1.5.3. Bully/Victim Status

The proportions of participants according to status and their self-identified/perceived bully/victim status are presented below in Table 9.

Table 9.

Proportion of Students Self-Identifying as Bully/Victims Compared to Formal Status

Classifications

<table>
<thead>
<tr>
<th>Status</th>
<th>Yes</th>
<th>No</th>
<th>Uncertain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Bully</td>
<td>0</td>
<td>0</td>
<td>42</td>
</tr>
<tr>
<td>Victim</td>
<td>5</td>
<td>2.1</td>
<td>158</td>
</tr>
<tr>
<td>Bully/Victim</td>
<td>11</td>
<td>19.3</td>
<td>17</td>
</tr>
<tr>
<td>Not involved</td>
<td>10</td>
<td>1.4</td>
<td>601</td>
</tr>
</tbody>
</table>

As evident in Table 9, the majority of those classified as bully/victims were unsure of their status (50.9%), or did not identify themselves as bully/victims (29.8%). A substantial proportion of bullies (25%) and victims (31.2%) were unsure of their status as bully/victims. However the majority of participants in these groups accurately identified that they were not bully/victims.

A chi-square test was conducted to assess whether there was a relationship between students’ perceived status (as bully, victim, bully/victim, non-involved) and their actual status as bully/victims. The results of the test were significant, \( \chi^2 (6, N = 1078) = 138.11, p < .001, V = .253 \). Examination of the standardised residuals indicated that the high proportion of bully/victims (standardised residual = 8.2) who nominated themselves as bully/victims, as well as the high proportion of non-involved participants who indicated that they were not
bully/victims (standardised residual = 2.1) contributed to the significant result. These results suggest that bully/victims are able to accurately identify themselves as both a victim and perpetrator of bullying.

Additional exploratory analyses (using Cohen’s kappa) were undertaken to further examine the meaning of these chi-square results since the concordance between respondents’ self-identified and empirically identified bullying status was relatively low. Indeed, only 10.7%, of bullies, 51.9% of victims, and 19.3% of bully/victims ‘correctly’ identified themselves as such when compared to their formal classification. In order to clarify these seemingly discrepant findings, Cohen’s kappa, a statistic used to provide an index of agreement between two ratings, was calculated. The Cohen’s kappa statistic ranges from -1 to +1. A value of 1 indicates perfect agreement, while a value of -1 indicates perfect disagreement. A value of 0 indicates that the similarity between the two ratings is the same as you would expect by chance. More specifically, the conventional interpretation of Cohen’s kappa is as follows: 0–0.20 = poor agreement; 0.21–0.40 = fair agreement; 0.41–0.60 = moderate agreement; 0.61–0.80 = good agreement; and 0.81–1.00 = excellent agreement. In general, kappa values of 0.60 or higher are considered acceptable for self-report measures (Landis & Koch, 1977). Data were recoded so that self-identified and questionnaire-identified status values were identical.

Three sets of analyses were conducted (for bully, victim, and bully/victim), with two Cohen’s Kappa statistics calculated for each set of analyses to determine the effect of including participants who self-classified as “maybe” in response to the two questions about their involvement in bullying. In other words, Cohen’s kappa was calculated twice, once with those classified as “maybe” being coded as not being involved in bullying, and once with those classified as “maybe” as being involved in bullying (as either bully, victim, or bully/victim).
For victims, Cohen’s kappa was .33 when students who classified themselves as “maybe” victims were coded as victims. The Cohen’s kappa was similar when students who self-identified as “maybe” victims were coded as “not-involved”, .39. The two Cohen’s kappa statistics obtained under the two coding systems were similar, and the agreement between the self-classified and the formally classified statuses could be categorised as being in the “Fair” range.

For bullies, Cohen’s kappa was .05 when students who classified themselves as “maybe” bullies were coded as bullies. The Cohen’s kappa when students who self-identified as “maybe” bullies were coded as “not-involved” was -.06, suggesting a trend for discordance between ratings. Indeed, both results are categorised as representing “poor” agreement.

For bully/victims, Cohen’s kappa was .18 when students who classified themselves as “maybe” bully/victims were coded as bully/victims, and .24 when students who self-identified as “maybe” bully/victims were coded as “not-involved”. These results indicate that the agreement between self-identification and formal-classification status ranged between “poor” and “fair”.

Overall, the present findings indicate that victims more readily identify their status than any other group within the bullying/victimisation cycle. In contrast, although a statistically significant proportion of bullies were able to classify themselves as bullies, the degree of agreement between self-classification and formal classification status was weak. Indeed, the proportion of bullies who correctly identified themselves as bullies was much smaller than the proportions of victims who correctly identified themselves as victims. As for bully/victims, the results indicate that although a statistically significant proportion correctly classified themselves as bully/victims, the degree of agreement between self-classification and formal classification was weak, although slightly stronger than that obtained for bullies. In addition, when bully/victims’ responses to the two initial questions (“Are you a victim?”/“Are you a bully?”)
were examined separately, bully/victims more readily identify themselves as victims than bullies (61.4% vs. 22.8%).

7.1.6. Cognitive Distortions

Given the critical role of cognition in behaviour, exploration of the thinking styles of bullies, victims, bully/victims, and non-involved participants was undertaken. Participants’ cognitive distortions were assessed in two primary domains: (i) self-serving and (ii) self-debasing, each of which divided into subdomains. This exploration was undertaken in terms of three key questions. First, the question of whether bullies, victims, bully/victims, and non-involved participants differ on levels of cognitive distortion was explored using ANOVA. Second, an examination was undertaken of the extent to which bullying status can be predicted by different types of cognitive distortions. Third, the extent to which cognitive distortions mediate the relationship between bullying/victimisation and psychosocial functioning was examined in both ‘Real World’ and ‘Cyber World’ contexts.

The results relating to the first two questions are presented separately for self-serving cognitive distortions (and subdomains) and for self-debasing cognitive distortions (and subdomains), in turn. The results relating to the third question – cognitive distortions as mediators of psychosocial functioning – are presented in a subsequent section.

7.1.6.1. Self-Serving Cognitive Distortions

7.1.6.1.1. Differences between Bullies, Victims, Bully/Victims, and Non-Involved Students

A one-way ANOVA was conducted to explore differences amongst participants classified as ‘bullies’, ‘victims’, ‘bully/victims’, and ‘non-involved’ on self-serving cognitive
distortions, as measured by the Total score of the HIT questionnaire. However the assumption of homogeneity of variance was violated; therefore the Welch $F$-ratio is reported. There was a significant difference amongst groups, $F(3,136.282) = 13.60, p = .000, \eta^2 = .05$, indicating a medium effect size. Post-hoc comparisons using the Games-Howell procedure indicated that the mean scores for bullies ($M = 2.98, SD = 0.62$) and bully/victims ($M = 2.99, SD = 0.87$) were significantly different from victims ($M = 2.50, SD = 0.68$) and non-involved students ($M = 2.54, SD = 0.59$). Statistical power to detect a significant difference between groups on Total Scores on the HIT scale, with an alpha of .05, was greater than .99.

Based on the recommendations of the authors of the HIT questionnaire, clinical significance was examined in order to explore whether the groups were also clinically different (and not just statistically different) on the degree to which cognitive distortions characterised their thinking styles. As previously outlined, the HIT questionnaire contains clinical cut-off percentiles corresponding to three different ranges: “nonclinical”, “borderline-clinical”, and “clinical” for the Total scores as well as for the subscale scores.

In order to determine whether the groups were clinically different on the Total HIT cut-off scores, a chi-square analysis of status (bully, victim, bully/victim, non-involvement) with clinical range was conducted. The results of the test were significant, $\chi^2 (6, N = 867) = 37.90, p < .001, V = .15$. Examination of the standardised residuals indicated that the high proportion of bullies (standardised residual = 3.7) and bully/victims (standardised residual = 2.4), and the low proportion of non-involved (standardised residual = -2.0) in the clinical range, as well as the low proportion of bullies in the non-clinical range (standardised residual = -2.6) contributed to the significant result. The proportion of bullies and bully/victims in the borderline and clinical range is consistent with the ideas of the authors of the HIT scale, who propose that scores in these ranges are suggestive of externalising pathology.
The authors of the scale recommend that if externalising pathology is suggested, a reasonable next step is to examine summary scores for the Overt and Covert Scales. Elevations on the Overt Scale may suggest a predilection for antisocial behaviour that typically involves confrontation of a victim, whereas elevations on the Covert Scale may suggest a preference for antisocial behaviour that is primarily non-confrontational. Thus to determine whether particular groups in the bully/victim cycle are more likely to have scores in the elevated ranges, two Chi Square analyses were undertaken for each summary scale.

**Overt Scale**

A contingency table analysis of status with clinical range for the Overt Scale scores revealed a significant relationship between these two variables, $\chi^2 (6, N = 868) = 67.20, p < .001, V = .196$. Examination of the standardised residuals indicated that the high proportion of bullies (standardised residual = 5.1) and bully/victims (standardised residual = 3.5) in the clinical range contributed to the significant result.

**Covert Scale**

A contingency table analysis of status with clinical range for the Covert Scale Score revealed a significant relationship between these two variables, $\chi^2 (6, N = 875) = 21.07, p = .002, V = .11$. Examination of the standardised residuals indicated that the high proportion of bullies (standardised residual = 2.3) and bully/victims (standardised residual = 2.7) in the clinical range contributed to the significant result.

Further fine-grained analysis of the behavioural referent subscales, Opposition-Defiance, Physical Aggression, Lying, Stealing is also recommended as useful by the authors.
of the scale, especially for indirectly assessing the probabilities of certain types of behaviour (e.g., as an adjunct to behaviour rating scales). Hence four additional chi square analyses were conducted consisting of status and clinical range for one of each of the four behavioural referent subscales to determine whether the groups differed on these subscales.

**Oppositional Defiance**

The results of a chi square analysis of status with clinical range for the Oppositional Defiance subscale revealed a significant relationship, \( \chi^2 (6, N = 878) = 59.93, p < .001, V = .185 \). Examination of the standardised residuals indicated that the high proportion of bullies (standardised residual = 3.7), bully/victims (standardised residual = 2.2), and victims (standardised residual = 2.8) in the clinical range, as well as the low proportion of non-involved participants in the clinical range (standardised residual = -3.4), and the higher number in the non-clinical range (standardised residual = 2.3), in addition to the lower proportion of bullies in the non-clinical range (standardised residual = -2.9) contributed to the significant result.

**Physical Aggression**

A significant relationship was found between the clinical range for Physical Aggression and status, \( \chi^2 (6, N = 878) = 59.84, p < .001, V = .185 \). Examination of the standardised residuals indicates that the high proportion of bullies (standardised residual = 4.9) and bully/victims (standardised residual = 3.4) in the clinical range, and the low proportion of bullies in the non-clinical range (standardised residual = -3.2) contributed to the significant result.
Lying

A significant relationship was found between the clinical range for Lying and status, \( \chi^2 \) (6, \( N = 878 \)) = 30.06, \( p < .001 \), \( V = .131 \). Examination of the standardised residuals indicates that the high proportion of bully/victims (standardised residual = 3.6) and bullies (standardised residual = 2.3) and in the clinical range, combined with the low proportion of bully/victims in the non-clinical range (standardised residual = -2.2) contributed to the significant result.

Stealing

A significant relationship was found between the clinical range for Stealing and status, \( \chi^2 \) (6, \( N = 878 \)) = 13.02, \( p = .04 \), \( V = .086 \). Examination of the standardised residuals indicates that the high proportion of bullies (standardised residual = 1.9) in the clinical range, combined with the low proportion of bullies in the non-clinical range (standardised residual = -1.8) contributed to the significant result.

Overall, these results suggest that bullies and bully/victims demonstrate levels of cognitive distortions that are consistently classified in the borderline or clinical range. Moreover, bullies and bully/victims demonstrate borderline or clinical levels of cognitive distortions in both overt and covert domains of anti-social behaviour, including behaviours manifesting oppositional-defiance, physical aggression, lying, and stealing.

7.1.6.1.2. Prediction of Status

In order to determine which specific types of cognitive distortions were the strongest predictors of bullying status, a forward stepwise logistic regressions was performed on bullying status as outcome and the four subscales of the HIT questionnaire as predictors: Self-Centred,
Blaming Others, Minimising/Mislabling, and Assuming the Worst. Given that the initial ANOVA showed that there was no difference on total HIT scores between groups of bullies and bully/victims, and no difference between groups of victims and non-involved students, but that these two sets of groups differed from each other, bullying status for this logistic regression was dichotomised as ‘bully or bully/victim’ and ‘victim or non-involved’. The regression revealed two cognitive distortions as the strongest predictor of group membership (‘bully or bully victim’): Minimising/Mislabling \( \chi^2 (1, N = 849) = 55.13, p < .000 \), and Blaming Others \( \chi^2 (2, N = 849) = 64.71, p < .000 \). The variance in group membership accounted for is small, however, with Nagelkerke’s \( R^2 = .104 \) and .121, for Minimising/Mislabling, and Blaming Others, respectively. Prediction success of the bully and bully/victim group was excellent with 99.9% correctly classified in Step 1, and 99.8% in Step 2.

Such findings indicates that bullies and bully/victims have thinking styles characterised by distortions in perceived harm caused to others (e.g., “Everybody lies, it’s no big deal”) and misattribution of blame and hostile attribution errors (e.g., “When I lose my temper, it’s because people try to make me mad”).

Table 10 shows regression coefficients, Wald statistics, odds ratios, and 95% confidence intervals for odds ratios for Minimising/Mislabling and Blaming Others scales. The Odds Ratio in Step 1 indicates that the odds of being a bully or bully/victim are 2.54 times more likely, with a one unit increase in scores on the Minimising/Mislabling subscale. In Step 2, with both subscales included in the model, the odds of being a bully or bully/victim is 1.87 times more likely with a one unit increase in scores on the Blaming Others subscale, and 1.68 increase for a one unit increase in Minimising/Mislabling.
Table 10

Logistic Regression Analysis of Bullying Status as a Function of Types of Minimising/Mislabling and Blaming Others Cognitive Distortions

<table>
<thead>
<tr>
<th>Step</th>
<th>Variables</th>
<th>B</th>
<th>Wald Test (z-ratio)</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Minimising/Mislabling</td>
<td>.933</td>
<td>51.90</td>
<td>2.54</td>
<td>1.97 - 3.28</td>
</tr>
<tr>
<td></td>
<td>Constant</td>
<td>-4.65</td>
<td>2.42</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Blaming Others</td>
<td>.625</td>
<td>89.11</td>
<td>1.87</td>
<td>1.25 - 2.80</td>
</tr>
<tr>
<td></td>
<td>Minimising/Mislabling</td>
<td>.518</td>
<td>1.68</td>
<td>1.61</td>
<td>2.46</td>
</tr>
<tr>
<td></td>
<td>Constant</td>
<td>-5.19</td>
<td>134.89</td>
<td>0.01</td>
<td></td>
</tr>
</tbody>
</table>

Overall, these results suggest that bullies and bully/victims are different from victims and non-involved students on self-serving cognitive distortions, especially on cognitive distortions that facilitate externalisation of blame (Blaming Others), and minimise harm caused unto others (Minimising/Mislabling).

7.1.6.2. Self-Debasing Cognitive Distortions

7.1.6.2.1. Differences between Bullies, Victims, Bully/Victims, and Non-Involved Students

A one-way ANOVA was conducted to explore differences amongst groups of students classified as ‘bullies’, ‘victims’, ‘bully/victims’, and ‘non-involved’ on self-debasing distortions, as measured by the CATs. However the assumption of homogeneity of variance was violated; therefore the Welch $F$-ratio is reported. There was a significant difference amongst groups, $F(3,140.92) = 76.76, p = .000, \eta^2 = .16$, indicating a large effect size. Post-hoc comparisons using the Games-Howell procedure indicated that the mean scores for victims ($M = 32.01, SD$
and bully/victims ($M = 35.62, SD = 26.58$) was significantly different from non-involved students ($M = 13.81, SD = 15.46$) and bullies ($M = 17.75, SD = 15.80$).

### 7.1.6.2.2. Prediction of Status

To determine which cognitive distortion was the strongest predictor of status in the bully/victim cycle, a forward stepwise logistic regression was performed on bullying status as outcome and the three subscales of the CATs as predictors: Physical Threat, Social Threat, and Personal Failure. Given that the previous ANOVA showed that bullies and bully/victims were significantly different compared to victims and non-involved students on the CATs Total score, bullying status for this logistic regression was dichotomised as ‘victim or bully/victim’ and ‘bully or non-involved’. The regression revealed that the Social Threat subscale was the strongest predictor of group membership (‘victim or bully/victim’), $\chi^2 (1, N = 908) = 159.78$, $p < .000$. The variance in group membership accounted for is small to medium, with Nagelkerke’s $R^2 = .237$. Prediction success of the victim and bully/victim group was excellent with 93.9% correctly classified.

Table 11 shows regression coefficients, Wald statistics, odds ratios and 95% confidence intervals for odds ratios for Social Threat.

### Table 11.

**Logistic Regression Analysis of Bullying Status as a Function of Social Threat Cognitive Distortions**

<table>
<thead>
<tr>
<th>Step</th>
<th>Variables</th>
<th>B</th>
<th>Wald Test (z-ratio)</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval for Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social Threat</td>
<td>2.53</td>
<td>119.62</td>
<td>12.54</td>
<td>7.92 - 19.74</td>
</tr>
<tr>
<td></td>
<td>Constant</td>
<td>-3.20</td>
<td>189.72</td>
<td>0.04</td>
<td></td>
</tr>
</tbody>
</table>

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As evident in Table 11, the Odds Ratio in Step 1 indicates that the odds of being a victim or bully/victim are 12.54 times more likely, with a one unit increase in scores on the Social Threat subscale. This indicates that victims spent more time thinking about themselves in a negative way and more time worrying about future attacks. This interpretation is consistent with descriptive statistics showing that the most strongly endorsed item amongst victims and bully/victims on the Social Threats subscale was: “I’m worried I’m going to get teased” ($M = 1.79, SD = 1.40$).

Overall, these results suggest that victims and bully/victims are different from bullies and non-involved students on negative automatic self-debasing cognitions, with victims and bully/victims demonstrating more negative thoughts, especially about how they are perceived by their peers. It appears that victims and bully/victims are more concerned with how they are perceived by their peers than about their own personal safety or a perceived lack of personal abilities. This is consistent with literature suggesting that during adolescence, peer acceptance and perceptions of peers are considered especially important to adolescents (Brown & Lohr, 1987; Kim, 1983), and these results suggest that this is especially salient for victims and bully/victims.

### 7.1.7. Cognitive Distortion as a Mediator between Bullying and Psychosocial Functioning

The following analyses examined whether cognitive distortions could mediate the relationship between bullying status and various psychosocial variables that are well-known to correlate with bullying and victimisation. This section commences with a discussion of several techniques that have been used to test meditational hypotheses, including a discussion of the relatively new approach to meditation, *bootstrapping*, as an alternative to traditional techniques. Self-serving and self-debasing cognitive distortions as mediators are analysed separately and presented for ‘Real World’ bullying contexts, as well for the ‘Cyber World’
victimisation context. Unfortunately, the role of cognitive distortion as a mediator in the relationship between ‘Cyber World’ bullying and psychosocial functioning could not be explored statistically due to an insufficient sample size of cyber bullies ($n = 16$). A final set of analyses (in this section) is then presented that investigate the relative strength of self-serving and self-debasing cognitive distortions as mediators of psychosocial functioning for bully/victims in the ‘Real World’ bullying context.

7.1.7.1. Approaches to Mediation

A mediation hypothesis posits how, or by what means, an independent variable (X) affects a dependent variable (Y) through an intervening variable (M) (Preacher & Hayes, 2008). In other words, it examines the indirect effect of one variable on another by way of a third variable.

The most common approach to mediation analysis is the causal steps strategy advocated by Baron and Kenny (1986) (Preacher & Hayes, 2008). In the causal steps strategy, as applied to the current analysis, cognitive distortion is considered a mediator if: (a) the independent variable, bullying, significantly accounts for variability in cognitive distortion ($a$ in Figure 1), (b) cognitive distortion significantly accounts for variability in the dependent variable (a psychological variable, such as depression scores) ($c$ in Figure 1), (c) cognitive distortion significantly accounts for variability in the psychological variable when controlling for bullying ($b$ in Figure 1), and (d) the effect of level of bullying or victimisation on the psychological variable decreases substantially when cognitive distortion is entered simultaneously with cognitive distortion as a predictor of the psychosocial variable ($c'$ in Figure 1).

However the causal steps strategy has been criticised chiefly on the basis that it does not directly test for the indirect effect (Preacher & Hayes, 2004). It is, in a sense, an indirect
way of testing for an indirect effect. It involves inferring mediation from a logical series of
equations, but it does not directly test for mediation.

Panel A: Illustration of the Direct Effect of Bullying/Victimisation on Psychosocial Functioning.

![Diagram of Panel A](image)

Panel B: Illustration of a mediation design: Bullying/Victimisation affects psychological functioning indirectly through cognitive distortions (self-debasing and/or self-serving).

![Diagram of Panel B](image)

**Figure 2.** Proposed mediational model between bullying/victimisation and psychosocial outcomes.

The Sobel test (Sobel, 1982, 1986), which is a formal and direct test of the indirect
effect, addresses this limitation, by testing whether the mediator significantly reduces the effect
of the independent variable on the dependent variable (c – c’ in Figure 1). It involves
calculating the ratio of the product \( ab \) (see Figure 2) to its estimated standard error (\( SE \))
(Preacher & Hayes, 2004). However, the underlying assumption of the Sobel test is that the
ratio of the indirect effects to its standard error is normal – an assumption that is appropriate
only for very large samples (Preacher & Hayes, 2004). In smaller samples (e.g., less than \( N < 200 \)), bias due to the skewed distribution of \( SE \) results in significance tests with inflated Type I error.
To address these shortcomings, bootstrap procedures have been applied to mediation analysis (Preacher & Hayes, 2004; Shrout & Bolger, 2002). *Bootstrapping* is a nonparametric sampling procedure used to directly test for the indirect effect that makes no assumptions about the distribution of the indirect effect. Bootstrapping can be applied in small sample size of between 20 – 80 cases (Efron & Tibshirani, 1993). Bootstrapping works by generating a sampling distribution of $ab$ from multiple (i.e., 5000) random samples with replacement from the original sample. The product $ab$ is estimated for each resample. The values of $ab$ (which is conceptually equivalent to $c - c'$) are then sorted from high to low, with the upper and lower bounds of the confidence interval (CI) defined as the percentile values associated with the desired CI. The upper and lower ends of the confidence interval are not equidistant from zero because such percentile based confidence intervals make no symmetry assumptions about the sampling distribution (Preacher & Hayes, 2008). More accurate confidence intervals can be derived through the process of *bias correction*. The bias correction operates by adjusting the ordinal position of the $ab$ values in the sorted distribution of $ab$ that are used as the upper and lower bounds of the confidence interval (Preacher, Rucker, & Hayes, 2007). The test of significance for the mediator hypothesis is whether or not the resulting CI spans zero. If the CI contains zero, then the indirect effect is not significantly different from zero (with the probability of error defined by the CI).

Statistical methodologists are advocating bootstrapping as one of the best methods for estimating and testing hypotheses about mediation (e.g., Bollen & Stine, 1990; Lockwood & MacKinnon, 1998; MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004; Shrout & Bolger, 2002). Although bootstrap procedures are well-known to statisticians it has only recently begun to appear in the general psychology literature (Chan, Ho, Leung, Chang, & Yung, 1999; Efron, 1988; Lee & Rodgers, 1988). When compared to the *causal steps*
approach and Sobel test, bootstrapping the indirect effect has shown to be superior in terms of statistical power and Type I error rate (e.g., Bollen & Stine, 1990; Lockwood & MacKinnon, 1998; MacKinnon et al., 2004; Preacher & Hayes, 2004; Shrout & Bolger, 2002).

All mediational analyses were estimated using the SPSS macro developed by Preacher and Hayes (2004). All analyses used bias corrected bootstrap 95% confidence intervals with 5000 resample.

7.1.7.2. Self-Serving Cognitive Distortion

7.1.7.2.1. ‘Real World’ Bullying

Several tests of the indirect effect of the HIT-Questionnaire on bullying and psychosocial functioning were examined. The results of these analyses are presented in Table 12.

Table 12. 

Mediation of the Effect of Bullying on Psychosocial Functioning through Self-Serving Cognitive Distortions

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Depression</td>
<td>-0.03</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-0.08</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-0.29</td>
</tr>
<tr>
<td>School Connectedness</td>
<td>-0.34</td>
</tr>
<tr>
<td>Internal Locus of Control</td>
<td>-0.18</td>
</tr>
<tr>
<td>External Locus of Control</td>
<td>-0.29</td>
</tr>
<tr>
<td>Avoidant Coping</td>
<td>-0.04</td>
</tr>
<tr>
<td>Social Support Seeking</td>
<td>-0.18</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>-0.29</td>
</tr>
<tr>
<td>Parent Attachment</td>
<td>-0.57</td>
</tr>
<tr>
<td>Peer Attachment</td>
<td>-0.59</td>
</tr>
<tr>
<td>Anger</td>
<td>-0.02</td>
</tr>
</tbody>
</table>

Note: * denotes significant mediation
As can be seen in Table 12, the HIT questionnaire mediated the relationship between bullying and two measures of psychosocial functioning: School connectedness and peer attachment. The signs of the confidence intervals indicated that self-serving cognitive distortions significantly increased the effect of bullying on increasing peer attachment, and increased the effect of bullying on decreasing school connectedness.

7.1.7.3. Self-Debasing Cognitive Distortion

7.1.7.3.1. ‘Real World’ Victimisation

In order to determine whether self-debasing cognitive distortions mediate the relationship between ‘Real World’ victimisation and psychosocial functioning, several tests of the indirect effect of the CATs on victimisation and psychosocial functioning were examined. The results of these analyses are presented in Table 13. Using the bootstrapping method to estimate the indirect effect, Table 13 shows that scores on the CATs mediated the relationship between victimisation and several measures of psychosocial functioning: Depression, anxiety, self-esteem, school connectedness, external locus of control, avoidant coping, problem-solving coping, parent attachment, peer attachment, and anger. However, the CATs scores did not mediate the relationship between victimisation and social support seeking or internal locus of control. The signs of the confidence intervals indicated that self-debasing cognitive distortions significantly increased the effect of victimisation on increasing depression and anxiety, avoidant coping, external locus of control, and increased the effect of victimisation on lowering self-esteem, school connectedness, problem-solving, peer and parent attachment.
Table 13.

*Mediation of the Effect of Victimisation on Psychological Functioning through Self-Debasing Cognitive Distortions*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Depression</td>
<td>0.43</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.20</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-0.32</td>
</tr>
<tr>
<td>School Connectedness</td>
<td>-0.17</td>
</tr>
<tr>
<td>Internal Locus of Control</td>
<td>-0.02</td>
</tr>
<tr>
<td>External Locus of Control</td>
<td>-0.17</td>
</tr>
<tr>
<td>Avoidant Coping</td>
<td>0.08</td>
</tr>
<tr>
<td>Social Support Seeking</td>
<td>-0.09</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>-0.14</td>
</tr>
<tr>
<td>Parent Attachment</td>
<td>-0.47</td>
</tr>
<tr>
<td>Peer Attachment</td>
<td>-0.32</td>
</tr>
<tr>
<td>Anger</td>
<td>0.07</td>
</tr>
</tbody>
</table>

For victims, the highest mean scores for items on the CATs were agreement on statements such as: “I’m worried I’m going to get teased” ($M = 1.84$, $SD = 1.42$), “I’m afraid of what other kids will think of me” ($M = 1.68$, $SD = 1.47$), “Students are going to laugh at me” ($M = 1.65$, $SD = 1.35$). Collectively, these thoughts are characteristic of anticipatory anxiety, which is consistent with the anticipation of victimisation that victims are likely to experience, and therefore the degree to which they are experienced is likely to play a major role in mediating between victimisation and psychosocial outcomes. Overall, the results of the present study indicate that self-debasing cognitive distortions exert a significant influence on the psychosocial functioning of ‘Real World’ victims across multiple measures of functioning.
7.1.7.3.2. ‘Cyber World’ Victimisation

Several tests of the indirect effect of the CATs on cyber victimisation and psychosocial functioning were examined. The results of these analyses are presented in Table 14.

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>95% CI Lower</th>
<th>95% CI Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>1.02</td>
<td>3.28*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.70</td>
<td>2.76*</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>-0.42</td>
<td>-1.54*</td>
</tr>
<tr>
<td>School Connectedness</td>
<td>-1.12</td>
<td>-0.13*</td>
</tr>
<tr>
<td>Internal Locus of Control</td>
<td>-0.26</td>
<td>0.42</td>
</tr>
<tr>
<td>External Locus of Control</td>
<td>-0.86</td>
<td>-0.11*</td>
</tr>
<tr>
<td>Avoidant Coping</td>
<td>0.52</td>
<td>1.46*</td>
</tr>
<tr>
<td>Social Support Seeking</td>
<td>-0.64</td>
<td>0.17</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>-0.47</td>
<td>0.15</td>
</tr>
<tr>
<td>Parent Attachment</td>
<td>-2.07</td>
<td>-0.41*</td>
</tr>
<tr>
<td>Peer Attachment</td>
<td>-3.22</td>
<td>-0.91*</td>
</tr>
<tr>
<td>Anger</td>
<td>0.34</td>
<td>0.72*</td>
</tr>
</tbody>
</table>

The CATs mediated the relationship between cybervictimisation and the following measures of psychosocial functioning: The signs of the confidence intervals indicated that self-debasing cognitive distortions enhanced the relationship between victimisation and several indices of psychosocial functioning, including increasing in depression, anxiety, external locus of control, avoidant control, and anger, and conversely lowering self-esteem, school connectedness, and peer and parent attachment. Comparison of psychosocial variables that are mediated by the CATs amongst both cyber and ‘Real World’ victims reveals several
common psychosocial variables, namely: Depression, anxiety, self-esteem, school connectedness, locus of control, avoidant coping, parent and peer attachment, and anger. This suggests that thinking styles of victims of both modalities of bullying have comparable effects on these variables of psychosocial functioning.

7.1.8. Self-Debasing vs. Self-Serving Cognitive Distortions: Which Type of Cognitive Distortion has a Stronger Effect on Psychosocial Functioning for Bully/Victims?

The question of whether the psychosocial functioning of bully/victims differs as a function of variation in types of cognitive distortions has not previously been examined in the literature. In order to address this question, the bootstrapping method was used to contrast the pair of indirect effects (CATs and HIT questionnaire) on the relationship between scores of bully/victims and measures of psychosocial functioning. This procedure enables testing of the null hypothesis that two indirect effects are equal by looking at the bootstrap confidence interval of the contrast \((a_1b_1 - a_2b_2)\) (see Figure 3), which would indicate whether the specific indirect effect of the first mediator is significantly different from specific indirect effect of the second mediator (Hayes, personal communication). A significant difference between the strengths of the mediators is indicated when the bootstrap confidence interval for the contrast does not contain zero.
Figure 3. Contrasting mediational model for the relationship between bullying/victimisation and measures of psychosocial functioning

The results of these contrasting mediational analyses are presented in Table 15. The HIT questionnaire did not mediate the relationship between bully/victims’ scores and any of the measures of psychosocial functioning. The CATs was a significantly stronger mediator than the HIT questionnaire on the following variables: Depression, anxiety, and self-esteem. More specifically, the signs of the confidence intervals indicated that self-debasing cognitive distortions increased levels of depression and anxiety, and decreased self-esteem. The results also indicated that the CATs mediated the relationship between bully/victims’ scores and school connectedness, parent attachment and peer attachment; however, the strength of the CATs as a mediator compared to the HIT questionnaire was non-significant, as the confidence interval for the difference between the CATs and the HIT included zero. In other words, the two indirect effects cannot be distinguished from each other in terms of magnitude, even though one is significantly different from zero and the other is not. Paradoxes such as this can occur when the confidence interval of one of the specific indirect effects involved in the contrast is close to zero (Preacher & Hayes, 2008).
Table 15.

*Mediation of Bully/Victim Scores on the ROBVQ on several Measures Psychosocial Functioning through Self-Debasing and Self-Serving Cognitive Distortions*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Mediator</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depression</strong></td>
<td>HIT</td>
<td>-0.01</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>0.14</td>
<td>0.67*</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.12</td>
<td>-0.65**</td>
</tr>
<tr>
<td><strong>Anxiety</strong></td>
<td>HIT</td>
<td>-0.09</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>0.06</td>
<td>0.47*</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.06</td>
<td>-0.46**</td>
</tr>
<tr>
<td><strong>Self-esteem</strong></td>
<td>HIT</td>
<td>-0.01</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.23</td>
<td>-0.02*</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>0.02</td>
<td>0.23**</td>
</tr>
<tr>
<td><strong>School Connectedness</strong></td>
<td>HIT</td>
<td>-0.04</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.21</td>
<td>-0.01*</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.002</td>
<td>0.21</td>
</tr>
<tr>
<td><strong>Internal Locus of Control</strong></td>
<td>HIT</td>
<td>-0.02</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.01</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.10</td>
<td>0.18</td>
</tr>
<tr>
<td><strong>External Locus of Control</strong></td>
<td>HIT</td>
<td>-0.07</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.13</td>
<td>-0.002*</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.03</td>
<td>0.12</td>
</tr>
<tr>
<td><strong>Avoidant Coping</strong></td>
<td>HIT</td>
<td>-0.03</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.01</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.21</td>
<td>0.07</td>
</tr>
</tbody>
</table>

(Table 15 continues)
### (Table 15 continued)

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Mediator</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Support Seeking</td>
<td>HIT</td>
<td>-0.09</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.12</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.24</td>
<td>0.11</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>HIT</td>
<td>-0.01</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.14</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.08</td>
<td>0.14</td>
</tr>
<tr>
<td>Parent Attachment</td>
<td>HIT</td>
<td>-0.17</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.31</td>
<td>-0.01*</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.03</td>
<td>0.29</td>
</tr>
<tr>
<td>Peer Attachment</td>
<td>HIT</td>
<td>-0.12</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.31</td>
<td>-0.01*</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.03</td>
<td>0.29</td>
</tr>
<tr>
<td>Anger</td>
<td>HIT</td>
<td>-0.05</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>CATs</td>
<td>-0.03</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>HIT vs. CAT</td>
<td>-0.22</td>
<td>0.06</td>
</tr>
</tbody>
</table>

* denotes significant mediation  
** denotes CAT as stronger mediator

---

### 7.1.9. The Role of Gender as a Moderator of the Relationship between Victimisation and Psychological Functioning

In order to determine whether gender moderated the association between bullying and psychosocial functioning, 12 3 (status) x 2 (gender) ANOVAs were conducted, with bonferonni adjustments made to alpha, .05/12 = .004. The status variable consisted of three groups: Bullies, victims, and bully/victims. Mediation is said to occur only if the interaction term is statistically significant. The results of these analyses are summarised in Table 18.
Table 6.

Analysis of Variance for Gender, Status and Psychosocial Functioning

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>η²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Depression</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status (S)</td>
<td>2</td>
<td>6.15</td>
<td>.04</td>
<td>.002*</td>
</tr>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>4.39</td>
<td>.01</td>
<td>.037</td>
</tr>
<tr>
<td>G X S</td>
<td>2</td>
<td>1.87</td>
<td>.01</td>
<td>.156</td>
</tr>
<tr>
<td>Error</td>
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<td>.001**</td>
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<td>.013</td>
<td>.164</td>
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<td>.877</td>
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<td>.025</td>
<td>.011</td>
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<td>.000</td>
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<tr>
<td><strong>Coping: Avoidance</strong></td>
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<td>.001</td>
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(Table 18 continues)
Table 18 continued

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<th>$\eta^2$</th>
<th>p</th>
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<td>.046</td>
<td>.001**</td>
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<tr>
<td>G X S</td>
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<td>0.56</td>
<td>.005</td>
<td>.570</td>
</tr>
<tr>
<td>Error</td>
<td>248</td>
<td>(30.00)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coping: Problem Solving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>2</td>
<td>0.17</td>
<td>.001</td>
<td>.848</td>
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<tr>
<td>G</td>
<td>1</td>
<td>0.03</td>
<td>.000</td>
<td>.864</td>
</tr>
<tr>
<td>G X S</td>
<td>2</td>
<td>2.59</td>
<td>.020</td>
<td>.077</td>
</tr>
<tr>
<td>Error</td>
<td>260</td>
<td>(38.28)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger</td>
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</tr>
<tr>
<td>S</td>
<td>2</td>
<td>30.12</td>
<td>.179</td>
<td>.000**</td>
</tr>
<tr>
<td>G</td>
<td>1</td>
<td>45.21</td>
<td>.141</td>
<td>.000**</td>
</tr>
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<td>G X S</td>
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<td>1.80</td>
<td>.013</td>
<td>.166</td>
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<tr>
<td>Error</td>
<td>276</td>
<td>(31.57)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Values enclosed in parentheses represent mean square errors

As illustrated in Table 18, none of the interaction terms were significant, indicating that gender did not moderate the association between bullying status and any of the measures psychosocial functioning. A summary of the main effects for each variable are detailed below. Only the significant effects will be discussed.

There was a statistically significant main effect on status for depression, however, the effect size was small (partial eta squared = .039). Post-hoc comparisons using the Tukey HSD test indicated that the mean depression score for bullies ($M = 45.80$, $SD = 10.09$) was significantly different from victims ($M = 52.28$, $SD = 12.42$) and bully/victims ($M = 53.42$, $SD = 12.88$). There was a statistically significant main effect on status for anxiety; however, the effect size was small (partial eta squared = .044). Post-hoc comparisons using the Tukey HSD test indicated that the mean anxiety score for bullies ($M = 50.50$, $SD = 9.88$) was significantly different from victims ($M = 58.11$, $SD = 11.20$) and bully/victims ($M = 60.12$, $SD = 11.56$).
There was also a main effect for sex on social support seeking coping, with females scoring higher ($M = 15.64$, $SD = 5.62$) than males ($M = 11.99$, $SD = 5.33$). Finally, there was a statistically significant main effect of status on anger, however the effect size was small (partial eta squared = .18). Post-hoc comparisons using the Tukey HSD test indicated that bully/victims ($M = 60.18$, $SD = 7.15$) and bullies ($M = 58.78$, $SD = 5.96$) scored significantly higher than victims ($M = 54.97$, $SD = 5.96$). There was also a statistically significant main effect for sex, with females ($M = 58.68$, $SD = 6.46$) scoring higher than males ($M = 54.49$, $SD = 5.90$).

7.1.10. Differences in Psychopathology between Students Involved in Dual forms of Bullying and Students Involved in a Single Medium of Bullying

Firstly, a chi-square analysis to determine whether a significant proportion of participants who were involved in either ‘real world’ bullying were also involved in cyber bullying (either as bullies, victims, or bully/victims) was originally planned; however there were insufficient numbers of participants within some groups to allow a valid analysis to be performed. Hence only descriptive statistics of the proportion of participants involved in dual modalities of bullying are reported. These are presented below in Table 17.

Table 17.

Frequencies of Participants Involved in Dual Modalities of Bullying

<table>
<thead>
<tr>
<th>‘Real World’ bullying</th>
<th>‘Cyber World’ bullying</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bully</td>
<td>Victim</td>
<td>Bully/Victim</td>
<td>Non-involved</td>
<td></td>
</tr>
<tr>
<td>Bully</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>7</td>
<td>12.1</td>
<td>2</td>
<td>3.6</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>Victim</td>
<td>1</td>
<td>0.4</td>
<td>23</td>
<td>9.9</td>
<td>4</td>
</tr>
<tr>
<td>Bully/Victim</td>
<td>6</td>
<td>10.7</td>
<td>6</td>
<td>10.7</td>
<td>7</td>
</tr>
<tr>
<td>Non-involved</td>
<td>2</td>
<td>0.3</td>
<td>13</td>
<td>1.8</td>
<td>1</td>
</tr>
</tbody>
</table>
It appears that of all groups, real world bully/victims were most likely to also be involved in cyber-bullying (10.7%), victimisation (10.7%), and bullying/victimisation (12.5%). For real world bullies, 12.1% are also classified as cyber bullies. For real world victims, 9.9% also experience cybervictimisation. A small proportion of non-involved ‘real world’ students experience cybervictimisation (1.8%). Compared to extensive research by Li (2007a, 2007b), these proportions are relatively low.

In order to explore whether differences in psychosocial functioning would emerge when students involved in dual modalities of bullying are contrasted with students involved in a single modality of bullying, only victims who were dually involved in real-world and cyber bullying \( n = 23 \) and those who were exclusively victimised in the ‘real world’ \( n = 205 \) could be involved in the analysis, as they met the minimum sample size requirement for conducting an ANOVA \( n = 20 \) (see Stevens, 1996). The sample size of those experiencing real world and cyber bullying \( n = 7 \), real world and cyber bully/victimisation \( n = 7 \) and those who were exclusively cybervictimised \( n = 13 \) was insufficient.

There were twelve different measures of psychosocial functioning on which singly and dually victimised students could be compared. A MANOVA was considered for this analysis; however Tabachnick and Fidell (2007) recommend that “[t]he best choice is a set of DVs that are uncorrelated with each other because they each measure a separate aspects of the influence of the IVs” (p. 249). Indeed, the DVs in this study are to some extent correlated. Furthermore, Tabachnick and Fidell (2007) state that “even moderately correlated DVs diminish the power of MANOVA” (p. 244). Therefore, twelve independent samples t-tests were conducted, with bonferonni adjustments made, \( \alpha = .004 \) (0.05/12), to explore differences in psychosocial functioning between participants involved in dual modalities of bullying (cyber and
real-world bullying; dual victim) and those exclusively involved in a single modality of bullying (real world only; single victim). The results of these analyses are shown below in Table 18.

Table 18.

_Differences between Dually and Singularly Victimised Participants on Psychosocial Functioning_

<table>
<thead>
<tr>
<th>Psychosocial Variable</th>
<th>Dual Victim</th>
<th>Single Victim</th>
<th>df</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Depression</td>
<td>61.43</td>
<td>12.02</td>
<td>51.27</td>
<td>12.12</td>
</tr>
<tr>
<td>Anxiety</td>
<td>62.69</td>
<td>9.39</td>
<td>56.68</td>
<td>11.64</td>
</tr>
<tr>
<td>Coping: Avoidance</td>
<td>21.67</td>
<td>7.59</td>
<td>15.43</td>
<td>5.97</td>
</tr>
<tr>
<td>Coping: Problem Solving</td>
<td>13.76</td>
<td>5.15</td>
<td>13.69</td>
<td>6.17</td>
</tr>
<tr>
<td>Coping: Social Support</td>
<td>12.83</td>
<td>6.20</td>
<td>13.59</td>
<td>5.77</td>
</tr>
<tr>
<td>Locus of Control: Internal</td>
<td>8.30</td>
<td>3.79</td>
<td>8.92</td>
<td>3.62</td>
</tr>
<tr>
<td>Locus of Control: External</td>
<td>15.15</td>
<td>4.29</td>
<td>16.31</td>
<td>4.35</td>
</tr>
<tr>
<td>Self-Esteem</td>
<td>14.26</td>
<td>6.74</td>
<td>18.35</td>
<td>5.59</td>
</tr>
<tr>
<td>School Connectedness</td>
<td>18.39</td>
<td>5.49</td>
<td>20.29</td>
<td>4.54</td>
</tr>
<tr>
<td>Parent Attachment</td>
<td>37.52</td>
<td>11.59</td>
<td>44.60</td>
<td>10.19</td>
</tr>
<tr>
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<td>10.53</td>
<td>44.80</td>
<td>9.04</td>
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<td>Anger</td>
<td>58.38</td>
<td>6.87</td>
<td>54.38</td>
<td>5.54</td>
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</table>

*p < .004

As can been seen from Table 18, victims of dual modalities of bullying scored significantly higher than victims of real-world bullying on depression, avoidant coping, and anger; and scored significantly lower on measures of self-esteem, and parent and peer attachment. It would appear that students who experience compounded, multiple modalities of victimisation are at a higher risk of poor psychosocial functioning than victims of one modality of bullying.

However, a follow-up ANCOVA was deemed necessary to determine whether differences in psychosocial functioning between victims of single and dual modalities of could be accounted for by the frequency of victimisation. The independent variable was victimisation
type (‘real world’ and combined ‘real world’ and ‘cyber world’ victimisation). The results of the
ANCOVA are presented in Table 19. As can be seen from Table 19, even after adjusting for
frequency of victimisation, there were significant differences between the two groups on
psychosocial functioning (depression, avoidant coping, anger, self-esteem, and parent and
peer attachment). This suggests victimisation in dual modalities may have a cumulative effect
on psychosocial functioning, independent of frequency of victimisation.
Table 19.

Analysis of Covariance for Dually and Singularly Victimised Participants on Psychosocial Functioning

<table>
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<tr>
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<td>Frequency of ‘cyber world’ victimisation (covariate)</td>
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<td>.13</td>
<td>.01</td>
</tr>
<tr>
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<td>.03</td>
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<td></td>
<td>Error</td>
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<td></td>
</tr>
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<td>Frequency of ‘real world’ victimisation (covariate)</td>
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<td>.05</td>
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<td>.06</td>
<td>.03</td>
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<td>Group</td>
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<td>.16</td>
<td>.69</td>
<td>.00</td>
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<td></td>
<td>Error</td>
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<td></td>
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<td>.004</td>
<td>.05</td>
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<td>.00</td>
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<td>.01</td>
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<td>Group</td>
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<td>.05</td>
<td>.02</td>
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<td>Error</td>
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<tr>
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<td>1.85</td>
<td>.18</td>
<td>.01</td>
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<td>Frequency of ‘cyber world’ victimisation (covariate)</td>
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(Table 19 continues)
(Table 19 continued)

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<td>.03</td>
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<td></td>
<td>Error</td>
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<td>175</td>
</tr>
<tr>
<td><strong>External LOC</strong></td>
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<td>Frequency of ‘cyber world’ victimisation (covariate)</td>
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<td>.01</td>
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<tr>
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<td>Group</td>
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<td>.74</td>
<td>.00</td>
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8. CHAPTER 8

8.1. Discussion

The primary impetus for this program of research was the recognition that understanding about, and the empirical investigation of, the relationship between cognitive styles and bullying status is limited. Accordingly, the cognitive characteristics of bullies, victims, and bully/victims and their role in maintaining bullying/victimisation status and mediating psychosocial functioning was a primary focus of the present research. A fundamental premise of the research program is the notion that the identification of factors that perpetuate roles within the bully/victim cycle is critical to the development of effective intervention strategies. In addition, gender differences in psychosocial functioning of those involved in the bully/victim cycle were investigated to ascertain whether gender-specific anti-bullying intervention strategies need to be developed.

The discussion of findings from this research program is presented in the following sequence; first, the accuracy with which participants can classify themselves within the bully/victim cycle is discussed. This is followed by a discussion of self-serving and self-debasing cognitive distortions as differential patterns of thinking amongst bullies and victims, and where bully/victims fit on this continuum. In addition, the mediating role of cognitive distortions is discussed for both ‘Real World’ and ‘Cyber World’ contexts. This is followed by an examination of differences in psychosocial functioning between victims of a single modality of bullying (‘Real World’) and victims of dual modalities of bullying (i.e., ‘Real World’ and ‘Cyber World’). Finally, the results relating to gender as a moderator of psychosocial functioning is discussed.
8.1.1. Self-Identification of Involvement in the Bully/Victim Cycle

A primary question of interest was how accurately are participants able to self-classify their schoolyard behaviour as being in the category of either ‘bully’, ‘victim’, ‘bully/victim’, or ‘non-involved’. The ability to recognise one’s part in the bully/victim cycle is an important initial step in the reduction of bullying behaviours and correspondingly has important implications for the assessment of bullying and for the development of effective anti-bullying interventions. To date, thorough exploration of this fundamental issue has been lacking. This is the first study to comprehensively explore concordance between students’ perception of their status across the entire bully/victim cycle (e.g., bully, victim, and bully/victim) and a formal classification status derived from self-report on an objective measure of bullying.

In the present study, slightly more than half of those individuals who could objectively be classified as victims of bullying accurately identified themselves as such. Conversely, a substantial minority of individuals failed to correctly identify themselves as victims of bullying. Interestingly, approximately one third of participants who were classified as victims reported being uncertain of their victimisation status. These findings are consistent with those of Theriot et al. (1995), who found that 50% of victims accurately identified their status. These results are also consistent with broader findings that victims tend to under-report their status when asked for their subjective assessment (Stockdale et al., 2002)

A significant, but much smaller proportion of participants who could be objectively classified as either a bully or a bully/victim were also able to correctly self-identify their status. Interestingly, a higher proportion of bullies and bully/victims reported being uncertain about their status, compared to victims. This is a new finding in the bullying literature, and sheds light on bullies’ levels of self-awareness, and as will be discussed, potentially on the way in which bullies self-report their behaviour.
There are several possible explanations for these findings, which are drawn from a variety of domains, including the literature on social desirability, social learning theory, with specific focus on the role of outcome-expectancies, normative beliefs, and cognitive distortions. In addition, a potential misunderstanding about the types of behaviours that constitute bullying, especially in the case of bullies, is also considered. However, first, the accuracy patterns of victims will be discussed, followed by those of bullies and bully/victims.

One explanation for why victims had the highest proportion of correct self-identification is that compared to perpetration, the impact of being victimised by bullying may have a greater impact on psychosocial functioning, which may correspondingly increase the saliency of their status as victims. This contention is supported by the wider literature, in which evidence the link between victimisation and poor psychological functioning/high emotional distress is stronger than that for bullying and poor psychological functioning. In this way, the higher emotional distress experienced by victims may highlight their status as victims, leading to higher rates of correct self-classification. In addition, victims are often characterised by hypersensitivity to threat (Barrett et al., 1996; Hadwin et al., 1997; Lu et al., 2007; Muris et al., 2004; Muris, Luermans et al., 2000; Muris, Kindt et al., 2000; Muris, Merckelbach et al., 2000), and therefore each incident of victimisation is more likely to resonate with the victim, who may ruminate on these incidents, and further magnify their status as victims. Although, as will be discussed in greater detail in section 9.1.3.2, it is also important to acknowledge the role of self-debasing cognitive distortions in mediating (increasing) emotional distress. As found in this study, victims’ propensity to hold self-debasing cognitions, which can become internalised as part of a victim’s self-concept and identity, contribute to emotional distress (e.g., elevated levels of depression and anxiety, and low levels of self-esteem). In this way, cognitive
distortions can be seen to drive the emotional distress that is hypothesised to lead to higher rates of self-identification.

However, it can also be argued that self-debasing cognitive distortions may in and of themselves contribute to victims’ higher rates of self-classification as “victim”. Conceptually, self-debasing cognitive distortions are thinking styles characterised by a negatively valanced bias in perception and interpretation, and since these cognitive distortions were found to be characteristic of victims, these distortions may amplify a victim’s perception of self as such, irrespective of the psychosocial impact of bullying. However, this research did not explore whether cognitive distortions could independently predict accuracy of self-classification. Future research could investigate this hypothesis by controlling for important psychosocial variables in the prediction of accuracy of self-classification from cognitive distortions.

Notwithstanding, approximately one third of the participants who were objectively classified as victims nominated being unsure about their status. One possible explanation is that some types of bullying may be more salient and obvious than others. For example, physical bullying, such as hitting, kicking, or punching, may be more salient than other forms of bullying such as manipulation of social relationships and social ostracism. Hence more salient types of victimisation may lead to higher rates of self-identification, and inversely less obvious types of victimisation may lead to lower rates of self-identification. This interpretation is partially supported by previous research, as Theriot et al. (2005) found that specific types of bullying are associated with higher rates of self-identification, and literature on victims of serious crimes suggest that victims are more likely to identify with their status if they have experienced more severe and violent crimes (Baumer, 2002; Greenberg & Beach, 2004).

Alternatively, it may be that differences in the frequency of victimisation lead some victims to more readily identify their status than others. This explanation has been
substantiated in a few studies that have found a positive relationship between frequency of
victimisation and higher rates of self-identification of victim status (e.g., Stockdale et al., 2002;
Theriot et al., 2005). Victims of relatively frequent bullying (e.g., weekly bullying) may more
readily identify their status than a victim of relatively infrequent (but regular) bullying (e.g., 2 or
3 times a month) because more frequent victimisation may be more likely to be internalised
and incorporated into one’s self-concept as victim, leading to higher rates of self-identification.

Furthermore, differences in the accuracy of self-identification may also be explained
from a socio-ecological perspective. From this view, the messages children receive from their
environments play a critical role in what types of behaviours are perceived as bullying, and
therefore influence self-identification. For example, in the family environment, children who
grow up in households where bullying is modelled as a conflict-resolution strategy or as a way
of achieving social/relational goals, may develop normative beliefs that bullying behaviours are
appropriate and acceptable. Thus when bullying behaviours are enacted against them at
school, they may not accurately perceive that they have been bullied, thus lowering rates of
self-identification. In addition, the school context may contribute to these beliefs and
perceptions when incidents of bullying go unaddressed. These idea have been supported in
findings by Unnever and Cornell (2004), who found that “students who perceived the school
climate to be tolerant of bullying, and students who described their parents as using coercive
discipline were less likely to report being bullied” (p. 373).

With respect to bullies and bully/victims, although statistically significant proportions
were able to accurately self-classify their respective statuses, these proportions were relatively
low. One reason purported to explain this finding is that bullies and bully/victims’ responses
may have been motivated by social desirability. This argument is consistent with previous
research emergent from the aggression literature, in which it is suggested that self-reports of
aggression are often underestimated because of factors associated with social desirability (Smith & Sharp, 1994). Socially desirable responses may be propelled by feelings of stigmatisation that are usually associated with reporting socially unacceptable behaviour (such as bullying). Social desirability response biases have also been shown to be characteristic of perpetrators of serious crime, such as sex offenders, who have been found to be more likely to report a moderate degree of acknowledgement of their behaviour, rather than completely deny or admit to their behaviour (Haywood, Grossman, & Hardy, 1993; Wasyliw, Grossman, & Haywood, 1994). This pattern of responding parallels the response tendencies of bullies in this study, the majority of which reported being unsure of the classification of their behaviour. Indeed, admission of oneself as a bully can be a stigmatising and potentially confronting experience, especially if it contradicts one’s own self-perception as a person who does not unjustifiably harm others. Therefore denial (or at least partial denial) of being a bully (as manifested by reporting being ‘unsure’) may serve to reduce psychological stress that may result from any cognitive dissonance. It may also play a role in preserving self-esteem, a postulation supported by the current study’s results, which showed that bullies’ scores of self-esteem were comparable to those of non-involved students.

An equally compelling possibility from a social-learning theory perspective is that bullies may underreport their behaviour because admission of bullying carries a risk of punishment. Although anonymity was reassured to participants, several participants voiced concerns related to their potential identification. Doubts about the anonymity of the questionnaire may have precluded some bullies and bully/victims from accurately reporting their behaviours. Unlike bullying, admitting victimisation would not lead to punishment from authority figures, which may also partly explain why victims demonstrated higher rates of accurate self-identification over bullies and bully/victims. Notwithstanding, potential negative outcomes for
victims may also explain the proportion of victims who were either unsure or denied their status as victims. For example, stigmatisation is a potential outcome stemming from admission of oneself as a victim. Indeed victimisation has been linked with a variety of negative response outcomes, including alienation from peers, rejection, and a reputations as being “weak” and “odd” (Olweus, 1978, Kenney, 2002).

As alluded to previously in the discussion of victims, the role of modelling (observational learning) across a variety of socio-ecological contexts, may also explain why bullies demonstrated lower rates of self-identification. For example, bullies may observe their peers being rewarded for bullying others, or observe family members being rewarded for bullying behaviours, or be reinforced for their own bullying behaviour when it goes unpunished, and interpret that such behaviour is an acceptable standard of conduct. Therefore, they may not see their interaction patterns as deviating from what they come to believe as “normal” and “adaptive” behaviour (i.e., bullying). In this way, bullies may come to develop a distorted sense of reality about their behaviour, leading to lower rates of self-identification.

Correspondingly, the role of cognitive distortions should also be considered when theorising about why bullies demonstrate lower levels of self-identification. As will be discussed further in Section 9.1.2.1, bullies and bully/victims are characterised by higher levels of externalising cognitive distortions, which may serve to explain away or justify their behaviours, and as such, they may not fully recognise their behaviour as bullying. That is, it is possible that cognitive distortions may interfere with bullies’ ability to objectively evaluate their behaviour and recognise their behaviour as bullying. For example, the Minimising/Mislabelling cognitive distortion measured in this study is a type of cognitive distortion that conceptualises anti-social behaviour as causing no real harm to others, or as being acceptable. Hence, bullies with this type of cognitive distortion in mind, may not perceive their behaviour to be bullying, and instead
misconstrue their behaviour as ‘horse-play’ or ‘fun’, leading to lower rates of self-identification. This explanation is consistent with the findings of Oliver et al. (1994), who found that just over half of the students surveyed in their study felt that teasing is done in fun.

Moreover, cognitive distortions may bias bullies’ and bully/victims’ definition and conceptualisation of bullying, and therefore bullies may lack a realistic definition with which they can compare their behaviours, and subsequently fail to recognise their bullying. Indeed a fundamental misunderstanding or bias in the types of behaviours and dynamics that constitute bullying is likely to lead discrepancies between objective and subjective measures of bullying experiences, and therefore an individual may not recognise their behaviours as bullying, when their behaviours actually meet objective criteria for bullying.

Collectively, these ideas suggest that a multitude of socio-ecological factors can be involved in how adolescents and young adults perceive their status within the bully/victim cycle. For example, individual factors, such as social desirability biases, cognitive distortions, lack of appropriate definition of bullying, as well as the responses of teachers and perceptions of peers towards bullying can influence how likely an individual is to report their involvement in bullying. On the basis of these factors, a number of implications/recommendations follow. First, a no-shame, no blame approach needs to be taken with bullies and victims to minimise feelings of stigmatisation, which will help victims to be able to come forth with their victimisation, and allow bullies to discuss and change their behaviour in a supportive, non-judgemental environment. Secondly, school personnel need to take a proactive stance when bullying occurs to demonstrate to all students that bullying is not an acceptable behaviour and will be dealt with accordingly. Thirdly, all students must be made aware of the definition of bullying, and how this is differentiated from ‘horse-play’ or fun. This would also include addressing of cognitive distortions that justify and rationalise bullying behaviours. Fourth, in
order to maximise the potential of successfully reducing bullying in schools, factors outside of school (such as family factors) that may be contributing to bullying or victimisation (or both if there are other environmental) may also need to be addressed, in a sensitive and non-judgemental manner.

8.1.2. Cognitive Distortions: Differences between Bullies, Victims, Bully/Victims, and Non-Involved Participants

Given the powerful influence of cognitive distortions as one mechanism underpinning the prosecution of a variety of socially unacceptable behaviours (e.g., domestic violence, sexual assault), as well as in perpetuating a diverse range of internalising problems (e.g., depression, anxiety, low self-esteem), it was investigated whether the two different types of cognitive distortions examined in this study would differentiate between bullies, victims, bully/victims, and non-involved participants. The results of this investigation are first discussed with regard to self-serving cognitive distortions, followed by self-debasing cognitive distortions.

8.1.2.1. Self-Serving Cognitive Distortions

The results of this study indicated that bullies and bully/victims were characterised by a stronger endorsement of self-serving cognitive distortions than victims and non-involved students. The difference in cognitive distortions between these two subgroups was found to be both statistically and clinically significant. This result is consistent with previous research showing that responses on the HIT questionnaire differentiate delinquent from non-delinquent samples (Barriga & Gibbs, 1996; Barriga et al., 2000). Furthermore, these results are consistent with studies reporting strong relationships between self-serving cognitive distortions and anti-social behaviour among non-delinquent adolescent samples (Barriga et al., 2001; Liau
et al., 1988; Nas et al., 2008). These results are also consistent with previous research showing that aggressive children are more likely to view aggression as justifiable and satisfactory conduct (Gottheil & Dubow, 2001; Slaby & Guerra, 1988; Williams & Guerra, 2007). These findings also consistent with the results of Oliver et al. (1994), who demonstrated that bullies believe that victims brought victimisation upon themselves, that teasing is done in fun, and that victimisation “helped” the victim to be stronger.

It was found that of the four types of cognitive distortions, Blaming Others and Minimising/Mislabelling were the strongest predictors of being classified as either a bully or a bully/victim. More specifically, Blaming Others, a type of cognitive distortion that serves to legitimise aggression because of one’s own past victimisation experiences, is considered to be especially relevant to bully/victims in light of their hypothesised trajectory into the bully/victim role. This is because it has been previously suggested that bully/victims originate as victims, but progressively develop as bullies, as they retaliate on an increasingly regular basis, and the results of this study suggest that this shift may be propelled by cognitions that endorse retaliation as an appropriate and just way of responding to victimisation. This interpretation is consistent with that of previous researchers (Crick & Bigbee, 1998; Crick, Grotpeter, & Rockhill, 1999) who hypothesised that bully/victimisation behaviour emerge from the interpretations made about victimisation experiences.

Moreover, this interpretation is consistent with the current study’s findings that the vast majority of identified bully/victims actually perceived themselves to be ‘pure’ victims. This serves to highlight an important difference between bullies and bully/victims, who although share similar cognitive profiles and behavioural topography (perpetration of bullying), differ in the purpose of their bullying behaviour. This interpretation is consistent with research suggesting that bullies perpetrate for instrumental purposes, such as sociometric status,
leadership, and dominance (Pellegrini & Bartini, 2000), whereas bully/victims perpetrate in a reactive manner to defend and gain control (Ireland, 2002; Marini et al., 2006; Proctor, & Chien, 2001; Schwartz, 2000).

A subsequent level of analysis examined cognitions representative of overt and covert anti-social behaviour. It was found that both bullies and bully/victims exhibited cognitions that reflected both overt and covert anti-social behaviour. However, compared to bully/victims, a higher proportion of bullies endorsed self-serving cognitions representative of overt anti-social behaviour (i.e., physical aggression and oppositional-defiance). Conversely, a higher proportion of bully/victims compared to bullies endorsed cognitions with covert behavioural referents (i.e., lying and stealing). As indicated by Barriga et al. (2001) “...elevations on the Covert Scale may suggest a preference for antisocial behaviour that is primarily non-confrontational” (p. 28). This suggests that bully/victims have a higher tendency to engage in covert forms of bullying, presumably because covert forms of bullying enable them to retaliate, whilst concealing their identity and/or their intentions of harm, which consequently reduces the likelihood of a reprisal attack. It is also possible that if covert means of retaliation are unsuccessful at fending off attackers, covert cognitions may give rise to more overt cognitions, which may pave a pathway from bullying/victimisation to outright ‘pure’ bullying. However, longitudinal research is needed to further examine this hypothesised trajectory.

It was also evident that bullies and bully/victims scored within the clinical range on cognitive distortions representative of oppositional-defiance, physical aggression, and lying. These will now each be discussed in turn. The finding that bullies and bully/victims fall within the clinical range for scores on cognitions that represent oppositional-defiant behaviours is commensurate with the nature of their bullying behaviours. That is, bullies and bully/victims perpetrate against the rules of their school and against the authorities that aim to enforce these
rules (e.g., teachers, principals), which is consistent with the conceptualisation of oppositional-defiance as a disrespect for rules, laws, or authorities. This explanation is also consistent with the study’s findings that bullies who have higher externalising self-serving cognitions have significantly lowered levels of school connectedness.

A somewhat unexpected finding of the study was that victims also scored in the clinical range for cognitive distortions representing oppositional-defiance. Examination of the specific items that victims endorsed revealed that victims scored highly on items indexing *reactivity* to provocation rather than *proactivity*, which usually characterises oppositional-defiance. For example, victims highly endorsed items such as “People are always trying to hassle me” and “When I lose my temper, it’s because other people make me mad”, which is consistent with their experiences of being regularly provoked and hassled by their peers. Victims may use reactive aggression as a defensive response to provocation; therefore victims’ classification in the clinical range may reflect a propensity for reactive aggression, rather than a “true” predilection for oppositional-defiance. This interpretation is consistent with research suggesting that victims are more reactively aggressive than non-involved individuals (Salmivalli & Nieminen, 2002) and with Marini et al. (2007), who found that victims exhibited more angry-externalising coping than non-involved students.

In the present study, bullies and bully/victims strongly endorsed self-serving cognitions that justified and rationalised physical aggression (i.e., in the clinical range). For example, the cognition, “When I get mad, I don’t care who gets hurt”, is suggestive of a failure to accept responsibility for one’s actions in physically hurting another. This finding is also consistent with the relatively high usage of physical aggression reported against victims in this study, and is consistent with the patterns of thinking found amongst perpetrators of domestic violence (Blacklock, 2001; Hamberger & Hastings, 1993), and sexual aggression (Xenos & Smith,
This result serves to highlight the notion that cognitive distortions that rationalise and justify physical aggression may be related to the actual behavioural expression of physical aggression. Correspondingly, this has implications for interventions for physical bullying, such that attention needs to be focused on the pattern of thinking associated with that form of aggressive behaviour, in addition to addressing actual overt behaviour. Evidence for the efficacy of behaviour-specific cognitive-based interventions has been previously reported in both the aggression (e.g., Guerra & Slaby, 1990; Leeman, Gibbs, & Fuller, 1993) and bullying-specific literature (e.g., Newman-Carlson & Horne, 2004; Olweus, 1993b, 1994; Orpinas, Horne, & Staniszewski, 2003).

In this study, bullies and bully/victims showed clinically significant levels of cognitions related to the usage of lying. This type of cognitive distortion may be manifested in two aspects of bullying behaviour. First, lying in bullies and bully/victims may manifest when trying to conceal their bullying behaviour when questioned by authority figures, enabling them to avoid punishment. In this way, bullies may be negatively reinforced for lying, which may strengthen the endorsement of such cognitions. Secondly, cognitive distortions related to lying may be used to justify relational forms of bullying, such as in the spreading of malicious rumours about certain peers. For example, the cognition “It’s OK to tell a lie if someone is dumb enough to fall for it” is suggestive that telling a lie, which may include spreading a rumour about a peer, is acceptable, providing a listener believes it to be true.

However, it is important to note that the propensity to lie is not confined to bullies. High levels of lying for the purposes of avoiding punishment or negative appraisals occur in many contexts of anti-social behaviour (e.g., stealing, vandalism, and assault). This has implications for the design of anti-bullying programs, which need to be sensitive to lying as a potential issue. Lying may also be manifested as minimising or mislabelling behaviour (errors of
omission), and therefore the definition of bullying behaviours must be clearly articulated and must assist bullies to recognise the reality of their behaviour in order to decrease minimisation/mislabelling patterns that enable bullying behaviour. For example, an empathy-training component, which attempts to increase awareness of victim-suffering, and challenge minimising and mislabelling patterns of cognition, may be useful. Indeed empathy-training is an integral component of the gold standard treatment for recidivism in sexual types of aggression (Maletzky, 1991), but although it can be useful, it would not by itself be sufficient in anti-bullying programs. Effective anti-bullying interventions must be tailored to individuals and consist of multiple components that attempt to address all factors that contribute to bullying in a given context. This study has revealed that cognitive distortions are one such component that is important to include in anti-bullying intervention strategies.

With respect to cognitions justifying of stealing, the proportions of bullies and bully/victims who endorsed cognitions justifying of stealing in the clinical range were relatively low. This is consistent with the study’s findings that none of the bullies in the sample reported perpetrating by stealing or damaging the property of their peers. Notwithstanding, there was a strong trend for bullies and bully/victims towards the endorsement of cognitions representative of stealing in the clinical range, which may indicate an emerging predilection for stealing. It is suggested that over time as bullies exit the school environment and enter adulthood, bullying behaviour may develop into more criminogenic behaviours (e.g., theft and/or vandalism). This argument is supported by longitudinal studies showing that adolescents who were anti-social in high school had a higher risk of becoming involved in criminal activity in adulthood (Loeber & Dishion, 1983; Magnusson, Stattin, & Duner, 1983; Olweus, 1993). In further support of the hypothesised trajectory, research has shown that conduct disorder symptomatology is predictive of bullying (in conjunction with low self-esteem) and bullying/victimisation (without
low self-esteem) (Kokkinos & Panayiotou, 2004) and that bullying and bullying/victimisation predict anti-social personality disorder (Sourander et al., 2007). While bullying may be associated with a heightened vulnerability to antisocial actions as an adult, it is nevertheless acknowledged that not all school yard bullies progress to criminogenic lifestyles and that not all adult criminals were adolescent bullies.

The convergent evidence from the current research into the relationship between cognitive distortions and involvement in bullying indicates that bullies and bully/victims are both statistically and clinically distinct from victims and non-involved students on self-serving cognitive distortions. The relationship between self-serving cognitive distortion and bullying reaffirms the need for interventions that aim to challenge these distortions as a way of addressing behaviour. Numerous interventions have incorporated methods to address cognitive distortions in antisocial youth (Gibbs, 1994; Gibbs et al., 1995; Guerra & Slaby, 1990; Vorrath & Brendtro, 1985). However they have not yet been trialed in adolescents involved in bullying. For example, one program that may be useful, insofar as cognition is linked to behavior (as indicated for bullies and bully/victims in the present study), is the EQUIP program (Gibbs et al., 1995). This program, which integrates peer-group and skills-training treatment approaches in group work with aggressive and antisocial adolescents, is designed to combat aggressive behaviour by motivating such youths to help one another in groups, and to equip the group with helping skills.

The EQUIP program addresses a number of factors that characterize anti-social individuals, including (a) delays or immaturity in moral judgment and egocentric bias, (b) social information-processing deficits and distortions, and (c) social skill deficiencies. The effectiveness of the EQUIP program has been evaluated in one systematic and controlled outcome study (Leeman, Gibbs, & Fuller, 1993) using incarcerated juvenile offenders aged 15-
18 years. Participation in the EQUIP program was found to stimulate substantial institutional and post-release conduct gains, relative to the control groups, in terms of self-reported misconduct, staff-filed incident reports, and unexcused absences from school. The program's impact was also evident 12 months after subjects' release. The recidivism rate for EQUIP participants remained low and stable (15.0% at both 6 months and 12 months after), whereas the likelihood of recidivism for the untreated subjects increased (from 29.7% at 6 months to 40.5% at 12 months). The EQUIP group also evidenced significant gains in social skills relative to the control groups. Research to determine whether the EQUIP program (or at least a modified version) can be applied successfully in a bullying context would be a fruitful area for future research. Indeed, based on the results of this study, which showed that bullies' cognitive distortions had a negative effect on school connectedness and attachment to peers, the EQUIP program as applied to bullies may require modification to include strategies that aim to improve school connectedness in order to enhance engagement with the program. Furthermore, in order to facilitate the group work required to participate in the EQUIP program, tasks that aim to facilitate constituents of peer attachment, such as trust, communication, and bonding. In turn, these tasks may gradually enable bullies to build meaningful relationships with their peers, without having to resort to bullying others as a way of sustaining peer affiliation and sociometric status.

8.1.2.2. Self-Debasing Cognitive Distortions

Self-debasing cognitive distortions have been found to permeate a vast range of psychological problems, including depression, anxiety, low self-esteem, and many other internalising disorders. Furthermore, the link between victimisation and psychosocial maladjustment is well-established in research and applied settings. Therefore, a key question
of interest was whether victims of bullying (including bully/victims) could be differentiated from non-victims of bullying, based on the frequency of reported self-debasing cognitive distortions.

This study revealed that victims and bully/victims are distinct from bullies and non-involved students on negative self-debasing cognitive distortions. More specifically, the thinking patterns of victims and bully/victims were characterised by a higher frequency of thoughts reflective of social and physical threat, and of personal failure. This finding is consistent with research showing that worries about personal harm, rejection, exclusion from social activities, being ignored by others, and betrayal, are the most frequent and intense worries reported by young children (Silverman et al., 1995). The study’s findings are also consistent with research demonstrating that victimisation is associated with cognitive vulnerability to depression (Gibb et al., 2005; Gibb & Alloy, 2006), negative attributional styles (Gibb et al., 2006), and perceptions of social threat (Bond et al., 2001; Crick & Bigbee, 1998; Galen & Underwood, 1997).

In particular, of the three main areas of anxiety, the logistic regression showed that socially-related threats most strongly discriminated victims and bully/victims from bullies and non-involved students, over and above concerns of physical threat and personal failure. This suggests that anxiety about future victimisation by peers, and how one is perceived by peers (social threat) is a chief social concern. Two main reasons are purported to explain these findings.

First, the reason why socially-related threats most strongly discriminated between victims and non-victims of bullying may be because compared to bullying, a reputation as a victim amongst peers is socially stigmatising, and therefore, victims may more frequently ruminate about how they are perceived by their peers, leading to heightened levels of social anxiety. This explanation is consistent with the view of Taylor et al. (1983), who describe that
the combination of perceiving oneself as a victim, with the perception that others also perceive oneself as a victim is “aversive” (p. 19). This is also commensurate with the literature on adolescent self-image, which suggests that peer perceptions are an important consideration in the evaluation of sociometric status and self-perception (e.g., Walker & Greene, 1986). Indeed, perceptions of peer perceptions may be magnified for victims of bullying, who are often stigmatised by their peers as “emotionally and/or physically weak” (Olweus, 1978), or as “nerds” and “afraid of fighting back” (Charach, Pepler, & Ziegler, 1995). These perceptions stand in contrast to the attitudes held towards bullies and aggression, which become increasingly positive and accepting with age (Bukowski et al., 2000; Graham & Juvonen, 1998; Rigby, 1997; Rigby & Slee 1991; Swearer & Cary, 2003). Indeed, peers have been found to “dislike victims of bullying and admire the bullies” (Swearer & Cary, 2003, p. 64), which is further likely to perpetuate the stigmatisation of being victimised, leading to higher levels of self-debasing cognitive distortions.

Secondly, victims’ and bully/victims’ anxieties relating to social threat may also stem from anticipatory anxiety about future episodes of victimisation, a contention that is consistent with the repetitive nature of bullying/victimisation. Conversely, bullies and non-involved students were not found to experience these anxieties as frequently, presumably because they are not bullied and therefore do not feel socially threatened. In fact, bullying has been found to increase perceptions of sociometric status (Bukowski et al., 2000; Graham & Juvonen, 1998; Rigby, 1997; Rigby & Slee 1991; Swearer & Cary, 2003). Notwithstanding, anticipatory anxiety may further preclude victims and bully/victims from seeking assistance for fear of reprisal attacks, which may further compound feelings of social threat, physical threat, and personal failure.
The process by which negative internalising cognitions become a habitual way of thinking about oneself and the world in the context of bullying is speculative, but it is likely that repeated victimisation, in conjunction with repeated failure to protect oneself against bullying, become internalised and lead to attributions of personal failure and inadequacy, as well as anticipatory anxiety about future attacks and perceptions of peers. However, longitudinal research is required to further clarify this mechanism. For example, it may be useful to monitor students over time and measure at various time points (i) duration of victimisation, (ii) frequency of self-debasing cognitive distortions, and (iii) psychosocial variables such as depression, anxiety, and self-esteem. Students can be grouped on the basis on their duration of victimisation, and comparisons can be drawn between the two groups on the frequency of cognitive distortions and psychosocial functioning to determine whether over time, students who experience victimisation over an extended period of time increasingly endorse more self-debasing cognitive distortions (and subsequently report poorer psychosocial functioning) than students who are victimised for a relatively shorter duration.

Notwithstanding, it is important to recognise that for victims, some of the items of the CATs that represented social threat are not necessarily distortions. For example, it is argued that the item “I’m worried I’m going to get teased” is not a cognitive distortion upon entering the peer environment for a student who is repeatedly teased at school. Instead, such a thought could be plausibly viewed as a normal and valid automatic thought in a peer environment. This suggests that the development of a specific tool designed to measure cognitive-distortions of victims of bullying may be required to better understand the cognitive content of victims in the context of victimisation. Indeed Doll and Swearer (2006) have recently suggested that cognitive distortions of victims may be best captured in cognitions that reflect a lack of power, such as in items like “Bullying is never going to stop” (dichotomous thinking), “It’s not that bad,
I can tough it out” (minimisation), “This is awful, I’d rather die” (magnification). This avenue could be a very fruitful area for future research.

8.1.3. Cognitive Distortion as a Mediator between Bullying and Psychosocial Functioning

The following section on cognitive distortion as a mediator between bullying and psychosocial functioning is divided into two parts. First, the role self-serving cognitive distortions in influencing levels of psychosocial functioning of ‘Real World’ bullies will be discussed, followed by a discussion of the role of self-debasing cognitive distortions in influencing psychosocial functioning of ‘Real World’ and ‘Cyber World’ victims, respectively.

8.1.3.1. Self-Serving Cognitive Distortions

8.1.3.1.1. ‘Real World’ Bullying

According to social-cognitive theories of aggression, cognitive processes such as cognitive distortions play an integral role in the behavioural expression of aggression. Aggressive behaviours, such as bullying, have also been associated with a higher risk of psychosocial maladjustment (e.g., Nansel, Craig, Overpeck, Saluja, & Ruan, 2004; Nansel et al., 2001). In this way, cognitive distortions may play an important role in regulating the relationship between bullying behaviour and psychosocial functioning.

However, the results of this study suggest that the cognitive distortions of bullies play a role in regulating only a limited variety of indices of psychosocial functioning. This study found that bullies’ self-serving cognitive distortions had a significant influence on two aspects of psychosocial functioning: school connectedness and perceptions of peer attachment. More
specifically, bullies who strongly endorsed externalising self-serving distortions reported lower levels of school connectedness and lower levels of peer attachment. These results partially support those of Williams and Guerra (2007), who found that higher moral approval of bullying was associated with lower school connectedness, but also with higher perceptions of friends as supportive, trustworthy, caring, and helpful. The current study’s findings are more in line with those of Thomas and Smith (2004), who found that violent youth are more likely to perceive school discipline and treatment by teachers as unfair, and that almost half of the youth surveyed in their study did not perceive themselves to be liked by class mates. Furthermore, these results appear to support general findings that suggest that more secure attachment may serve as a protective factor against children’s aggressive behaviour (Ainsworth, 1989; Belsky & Cassidy, 1994; Dryfoos, 1990; Lyons-Ruth et al., 1991). In addition, these results are consistent with the study’s finding that bullies reported the lowest level of social-support seeking coping. However, the present findings are at odds with those of Farmer et al. (2002), who found that aggressive boys were “well connected to the peer ecology” (p. 618) and affiliated with a wide range of aggressive and non-aggressive peers. One reason to explain this discrepancy between the current findings, and those of Farmer et al. (2002), is that whilst bullies may be well-connected to the peer ecology, these connections may lack deep and meaningful qualities such as trust, communication, and bonding, qualities which encapsulate school connectedness. Indeed, Farmer et al. measure peer affiliation by asking students “Are there some kids in your classroom who hang around together a lot? Who are they?”, which does not tap into the three constituent aspects of school connectedness.

Notwithstanding, previous research has not examined how bullies’ self-serving cognitions influence school connectedness and peer attachment. This study is the first to undertake such an investigation, and the results relating to school connectedness and peer
attachment are elaborated on further below. This will be followed by a discussion of possible explanations for why self-serving cognitive distortions were not found to mediate a wider range of aspects of psychosocial functioning.

With respect to school connectedness, one reason to explain why this variable was found to be lowered in bullies with higher levels of self-serving cognitive distortions is that self-serving cognitions, which serve to legitimise and normalise aggressive behaviour, are contradictory to a school’s ecology and ethos, which aims to promote harmony amongst students, and conversely, is prohibitive of aggression. In this way, cognitive distortions are contradictory to all aspects that espouse school connectedness, such as perceptions that teachers are caring and fair, that one’s relationship with teachers are of good quality, and that one feels that he or she ‘belongs’ to the school. Therefore, bullies who have higher levels of self-serving cognitions would be less likely to feel connected to their school environment, leading to a decreased sense of school connectedness.

One implication of this argument is that anti-bullying interventions applied by schools may not be readily adopted by bullies because bullies feel that teachers (and/or other important school personnel, such as a school welfare officer or psychologist) do not care, do not treat students fairly, in addition to perceiving that they do not have good relationships with their teachers. Therefore, bullies may be unlikely to be motivated by, or to be receptive to, strategies that are aimed at behaviour change if they are facilitated by teachers or other school personnel who are not perceived positively. Therefore, an important pre-cursor to the implementation of anti-bullying interventions is to explore with bullies their perceptions, attitudes, and relationships with teachers and other important school personnel, and attempt to collaboratively work on improving their relationship with the school as a whole. Notwithstanding, teacher attitudes may also require assessment to determine whether
teachers are behaving in ways that contribute to low school connectedness. For example, teachers may appear to be biased favourably towards victims, or students of a particular race or gender, and indeed there is research to support this supposition (e.g., Mishna et al., 2005). Overall, these ideas mean that both teachers’ and bullies’ attitudes towards each other need to be addressed. This may entail education for bullies about teachers’ responsibilities in response to schoolyard bullying and tips on how to promote better relationships with their teachers. Similarly, structured times may need to be set or specific professional development workshops developed, for teachers to give them an opportunity to reflect on how they interact with different types of students, as well as training on how to promote positive relationships with students who are bullies whilst simultaneous disciplinary action is required.

With respect to peer attachment, the study’s results indicated that for bullies, a higher endorsement of externalising, self-serving cognitions was associated with lower attachment to peers. It is argued that cognitive distortions impact on all constituent parts of peer attachment, namely, trust, communication, and closeness (alienation). For example, some types of cognitive distortions such those of Self-Centred, where the individual places excessive importance on one’s own current views, expectations, needs and rights, and disregards the views and feelings of others, is likely to alienate peers. Assuming the Worst, which reflects the attribution of hostile intentions to others, is likely to foster mistrust of peers. Combined, these cognitive distortions would be expected to interfere with reciprocal, meaningful communication with their peers. In this way, cognitive distortions can be seen to impact detrimentally on all three constituents of peer attachment.

In addition, whilst previous research has found that bullies are “well-connected to the peer ecology” (Farmer et al., 2002, p. 618) bullies may not use their peers in a way that facilitates peer attachment. For example, bullies may not use peers to communicate about
personal problems, (which would require a sense of trust, communication, and bonding) because admission of problems or vulnerability in general, may be perceived as a sign of weakness, which bullies are likely to try to avoid in order to sustain their “tough” image. This interpretation is supported by research showing that aggressive individuals highly endorse statements such as “If you back down from a fight, everyone will think you are a coward” (Slaby & Guerra, 1988), which indicates that bullies perceive the need to uphold an image of bravado, and that any behaviours reflective of the contrary are to be avoided. Moreover, instead of using their peer network for support and companionship, a wider network of peers may be used by the bully to demonstrate that he/she is dominant and strong, thereby reinforcing their sociometric status.

Self-serving cognitive distortions were not found to have a significant effect on bullies’ levels of depression, anxiety, self-esteem, anger, locus of control, parent attachment, or style of coping. There are a number of possible interpretations for this result. First, externalising cognitions may not be related to internalising constructs, and therefore have no bearing on the relationship between bullying and the aforementioned variables. Aggressive individuals have been found to be more likely than their non-aggressive counterparts to hold beliefs that aggression will lead to positive outcomes, reduce aversive treatment by others (Perry et al., 1986), increase self-esteem, and avoid negative image (Slaby & Guerra, 1988). Such beliefs surrounding the outcome-expectancies may be more important in mediating psychosocial outcomes than cognitive distortions justifying of aggressive behaviours. For example, an expectancy belief that aggression increases self-esteem may work to increase the self-esteem of a bully. However, a belief that aggression does not increase self-esteem is likely to have the effect of decreasing the self-esteem of a bully, especially if they have a view of themselves as someone who does not unduly harm others. Indeed, as will be discussed, this scenario may
serve to explain why bully/victims often demonstrate the poorest levels of psychosocial functioning out of all involved in the bully/victim cycle. It has been theorised that bully/victims bully others in order to defend themselves against victimisation, and therefore, bully/victims may not bully out of the view that bullying increases (either directly or indirectly) self-esteem (or other indices of psychosocial functioning), and in this way, bullying others may actually contribute to lowering self-esteem. Additionally, this argument is supported by the findings of Pellegrini and Bartini (2000), which revealed that cognitions about bullying did not predict bullying status, but that such cognitions may be more important in ameliorating cognitive dissonance resulting from discrepancies between one’s view of bullying and dominant peer or school rules.

Furthermore, although externalising behaviours are theoretically linked to externalising cognitions, the sole variable that represented externalising behaviour, anger, was not mediated by externalising cognitions for bullies. However, this result is consistent with research that purports that bullies are proactive/instrumental users of aggression, a type of aggression that is not usually propelled by anger, as it is in reactive forms of aggression (Salmivalli et al., 1998). Therefore, externalising cognitive distortions may not play a significant role in the regulation of anger in the context of bullying. However, the measurement of anger in this study included items representing both reactive and proactive (instrumental) anger, in addition to items about anger-control, and therefore it may have been more useful to examine separately the role of externalising cognitive distortions on the different types of anger to determine whether externalising cognitive distortions influence more specific subtypes of anger.
8.1.3.2. Self-Debasing Cognitive Distortions

8.1.3.2.1. 'Real World' Victimisation

Victims of bullying have been found to be more likely to experience psychosocial maladjustment, and at a higher risk of developing clinically significant psychological problems (see Swearer et al., 2004). Self-debasing cognitive distortions have been found to influence the trajectory and development of a wide range of psychological problems (e.g., Ambrose & Rholes, 1993; Beck, 1993; Blaine & Crocker, 1993). Therefore in this program of research, it was argued that cognitive distortions would play an important role in mediating the relationship between psychosocial functioning and victimisation.

The results indicated that the internalising cognitions of victims have a significant effect on influencing several aspects of psychosocial functioning. More specifically, victims' self-debasing cognitive distortions were found to increase levels of depression, anxiety, anger, avoidant coping, and external locus of control, and conversely lower levels of self-esteem, school connectedness, perceptions of parent and peer attachment, and utilisation of problem-solving oriented coping strategies. In general, these results indicate that a diverse range of indices of psychosocial functioning are influenced by the degree to which victims hold negative beliefs about themselves. It was found that the more frequently victims thought negatively of themselves, the more likely they were to experience poor psychosocial functioning. These findings are in line with those of Graham and Juvonen (1998), who found that self-blaming attributions mediated the relationship between victimisation and adjustment problems such as loneliness, social anxiety, and low self-esteem. Similarly, this outcome is commensurate with previous research suggesting that the relationship between peer victimisation and depression may be mediated by cognitive vulnerability (Gibb et al., 2003; Gibb et al., 2004; Mezulis et al., 2006).
In addition, these results demonstrate that although the content of cognitions were uniquely related to themes of depression and anxiety, their effects on decreasing psychosocial functioning extended beyond their respective affective states. That is, the effects of self-debasing cognitions appear to extend beyond depression and anxiety, to other domains such as self-esteem, school connectedness, coping, external locus of control, attachment, self-esteem, and anger. This serves to highlight the potency of negative internalising cognitions in mediating psychosocial functioning. It is suggested that negative internalising cognitions reflective of depression and anxiety may indirectly affect other domains of psychosocial functioning. For example, if an individual experiences persistent anxious thoughts that begin to interfere with the performance of daily tasks, this may lead to thoughts of personal failure, and corresponding depressive symptoms. Subsequently, other domains may become negatively affected, including self-esteem, and locus of control, which may also lead to the development of maladaptive coping strategies (e.g., increased avoidance of daily tasks and decreased active problem solving).

Furthermore, the finding that victims’ anger is mediated by internalising cognitions lends support to research that suggests that victims can be reactive aggressors (e.g., Salmivalli & Nieminen, 2002). Self-debasing internalising cognitions of victims may give rise to anger as a consequence of feelings of unjustness about their being victimised. As was outlined in the introduction to this thesis, the school ground is expected to be an environment nurtures students’ ability to learn. However, being victimised is contrary to these expectations and responsibilities, which may lead victims to feel anger and resentment at not being protected in such an environment that sanctions against aggression. Although, based on this argument, it would be expected that victims’ scores on school connectedness would differ markedly from bullies and non-involved students. However, the results of this study showed that victims’
levels of school connectedness were comparable to bullies, bully/victims, and non-involved students. Notwithstanding, it is also possible that victims do not ‘blame’ their victimisation on a lack of protection provided by the school. Instead, victims may view the school climate as one characterised by a great deal of empathy and support, even in the face of bullying. In this way, the mere perception that a school is making an effort to address bullying, even if it is unsuccessful, may sustain school connectedness.

An alternative argument has been posed by Musher-Eizenman (2004), who suggested that victims’ scores on anger may reflect a tendency to report having more aggressive fantasies, but not actual behavioural manifestations of aggression or anger. Therefore, victims in this study may have been experiencing thoughts of personal failure because of a perceived inability to express or regulate anger, or even a failure in being able to respond effectively to bullying. In this way, more frequent thoughts of a self-debasing nature, especially those reflective of personal failure, may fuel higher levels of self-reported anger, which lends further support to the idea that the relationship between victimisation and anger is mediated by self-debasing cognitive distortions. For anti-bullying interventions, this implies that an anger-management component is highly important and necessary in helping victims to cope by appropriately expressing and regulating their anger. This also has implications clinically, such that the anger that victims feel must be validated and normalised in the context that being victimised is contrary to their right to safety and freedom from victimisation.

Overall, these results suggest that internalising, self-debasing cognitions affect victims across a wide range of areas of psychosocial functioning. This strongly indicates the need to address negative internalising cognitions as part of any anti-bullying intervention so as to prevent, or at least minimise deterioration in psychosocial functioning. Similar to suggestions by Gottheil and Dubow (2001), this may involve cognitive restructuring beliefs of self-efficacy to
increase more effective responses to bullying, locus of control beliefs to change one’s environment, as well as outcome-expectancy beliefs about one’s choice of response, which may affect one’s willingness to engage in that response.

One promising program for victims that addresses cognitive distortions as one component is the Bully Busters program (Horne, Bartolomucci, & Newman-Carlson, 2003). This program is designed for children in kindergarten to middle school (Year 8) and helps teachers and students to identify antecedents, behaviours, and consequences in events of bullying. More importantly, the program teaches students to challenge and replace negative thoughts, develop ways of intervening in bullying, and to distinguish between bullying situations that they can manage independently, and those in which they need assistance. Other components of the program include anger management, conflict resolution, affective education, empathy training, cognitive restructuring, social skills training, and problem-solving skills training. However, as the program is tailored to the individual, few studies have evaluated its effectiveness. In one primary school, implementation of the Bully Busters program was associated with a 40% reduction in mean aggression scores, and a 19% reduction in mean victimisation scores (Orpinas, Horne, & Staniszewski, 2003). In a subsequent study, teacher participation in the Bully Busters program was found to increase teachers’ knowledge and implementation of bullying intervention techniques and reduce the frequency of classroom bullying (Newman-Carlson & Horne, 2004). However, this anti-bullying intervention has not been evaluated among older students in a high school setting. In the context of the current findings, examination of the effectiveness of the Bully Busters program among older students would be an important avenue for future research.
8.1.3.2.2. ‘Cyber World’ Victimisation

The role of cognitive distortions in mediating the relationship between psychosocial functioning and cybervictimisation was explored to further understanding of the cognitive processes that influence the psychosocial functioning of cyber victims. Preliminary investigations into the link between psychosocial functioning and cybervictimisation have been undertaken previously, but no studies have explored the role of cognitive distortions in influencing this link. One of the aims of this study was to explore this gap in research.

The results of this study suggest that self-debasing cognitive distortions have a profound impact on the relationship between cybervictimisation and several indices of psychosocial functioning. More specifically, higher internalising cognitions were related to increased levels of depression, anxiety, perceptions of an external locus of control, avoidant coping, and anger, and conversely related to decreased levels of self-esteem, school connectedness, and parent and peer attachment. The variables mediated are similar to those mediated for ‘real-world’ victims, except, for problem-solving coping, which was not mediated in the context of cyber-victimisation. Furthermore, although the psychosocial variables mediated by self-debasing cognitions were similar for real-world and cyber-world victims, it was evident from visual comparison of the confidence intervals that internalising cognitions had a more pronounced effect in mediating psychosocial functioning for ‘cyber-world’ victims over ‘real-world’ victims. In particular, visual inspection of the confidence intervals revealed that depression and peer attachment were the two most strongly mediated psychosocial variables. Several explanations that are based upon the insidious nature of bullying are proposed to explain why internalising cognitions had a more pronounced effect across a wide range of indices of psychosocial functioning, especially on depression and peer attachment.
First, compared to ‘real world’ forms of bullying, many forms of ‘cyber world’ bullying have a permanence and inseparability from which it is difficult to dissociate. For example, mobile phones are generally carried all the time, and computers are generally used everyday for social communication and scholastic tasks, making them difficult for victims to ignore. Moreover, emails and defamatory material or modified photographs about a person on the internet can be extremely difficult to remove once posted, especially if it is posted on a medium that a victim does not have access to. In addition, such material may be open to an infinite audience who can download it and save it immediately, and also re-upload it at another location (e.g., website), which means that even if the original location becomes banned or blocked, the bullying can still be enacted at a different location. Furthermore, the potential for an infinite audience also means that multiple perpetrators can become involved in the abuse, which may further compound a victim’s psychological distress and detachment from peers.

Moreover, in contrast to ‘Real World’ bullying, bullying in the ‘Cyber World’ can occur both during and after school hours, which opens the floodgates for increased frequency of victimisation. As a consequence, cyber victims may feel trapped and unable to escape or seek respite from victimisation, leaving victims feeling constantly vulnerable to threats. Indeed, the predictability associated with ‘Real World’ bullying is absent in ‘Cyber World’ bullying (in terms of the timeframe in which it can be perpetrated), as ‘Cyber World’ world bullying can occur anywhere, at any time, which is likely to heighten a cyber victim’s level of anticipatory anxiety and social threat-related cognitive distortions, and correspondingly have a profoundly negative impact on psychosocial functioning.

The results of this study also indicated that cyber victims were unlikely to tell a figure of authority such as a parent or teacher about their experiences. This is likely to isolate them from obtaining assistance, and is also consistent with their higher tendency towards an avoidant
style of coping, which may prolong their distress, leading to more serious impairments in psychosocial functioning, and corresponding increases in the frequency of self-debasing cognitive distortions. In addition, some types of cyber bullying may not be observable to anyone except for the victim, such as bullying through text messages or emails, and thus there may be no opportunity for a third-party (such as peer bystanders or teachers) to intervene (at least in ‘real-time’), as there would be in ‘Real World’ bullying. This means that the duration of victimisation may be further prolonged, and may contribute to a higher endorsement of self-debasing cognitive distortions. However, any attempt to intervene is often made difficult when the identity of the bully is anonymous. Indeed, the anonymity enabled by cyber bullying may give rise to more severe, intense, and antagonistic threats or abuse, which again, may further negatively impact on the psychosocial functioning of cyber victims. The view that abuse by perpetrators may be more severe in the context of cyber bullying may also suggest that cyber bullies have lower levels of empathy than ‘Real World’ bullies. Future research comparing empathy levels across ‘Real World’ bullies, ‘Cyber World’ bullies, and bullies who perpetrate in dual modalities would be important to explore to determine whether empathy deficits exist, and if so, whether this varies amongst the aforementioned groups, which could then be used to inform the emphasis of empathy-training required in anti-bullying interventions.

In light of above reviewed factors, it is argued that cyber victims are more likely to experience frequent negative thoughts of helplessness and personal failure, leading to substantially increased psychological distress. The intrusive and often uncontrollable nature of cyber bullying is likely to heighten a cyber victims’ sense of threat and vulnerability, and correspondingly increase the frequency of negative thoughts and strongly affect psychosocial functioning. This implies that compared to ‘Real World’ victims, ‘Cyber World’ victims require more intensive support. For example, cyber bullying interventions may require more intense
emphasis on cognitive re-structuring, relaxation strategies, coping strategies, in addition to immediate action to stop the spread and continuation of cyber bullying (e.g., blockage of defamatory websites, confiscation of mobile devices), and efforts to identify the perpetrator of the cyber bullying in order to address the source of the bullying.

8.1.4. The Role of Gender as a Moderator of the Association between Victimisation and Psychological Functioning

This study investigated whether gender moderated psychosocial functioning for bullies, victims, and bully/victims. The role of gender was deemed important in this study because males and females have in general been found to bully, and to be victimised, in different ways (e.g., Crick, 1995; Crick & Bigbee, 1998; Crick, Casas, & Ku, 1999), which may be associated with differential psychosocial functioning. Such a finding would suggest a need to tailor anti-bullying interventions to gender.

In this study, it was found that gender did not play a role in influencing the psychosocial functioning of any groups involved in the bully/victim cycle. In other words, there were no differences in reported psychosocial functioning between males and females who were bullies, victims, or bully/victims. With respect to victims, this finding is consistent with research demonstrating that both male and female victims are similarly characterised by depression (Dao et al., 2006; Kumpulainen et al., 1998; Slee, 1995; Yang et al., 2006), anxiety (Crick & Bigbee, 1998; Marini et al., 2007; Slee, 1994; Vuijk, et al., 2007), low self-esteem (Bosacki et al., 2004; Lopez & Dubois, 2005; Marini et al., 2005; Mynard et al., 2000; O’Moore et al., 1997; Prinstein et al., 2001), internalising coping strategies (Andreou, 2001; Bijeeteber & Vertommen, 1998), and an external locus of control orientation (Bowker et al., 2000; Halstead et al., 1993). It appears that these domains of functioning are universally affected by victimisation regardless...
of gender. However the study’s findings are contrary to those of Rigby (1996), who found that victimisation is differentially associated with anger for males, but with depression for females. Furthermore, the study’s results are contrary to findings that compared to boys, victimised girls use more social support coping (Smith et al., 2008), and experience significantly more anxiety (Grills & Ollendick, 2002).

Similarly, this study revealed that gender did not play a role in moderating psychosocial functioning of bullies. In other words, these findings indicate that both male and female perpetrators of bullying are comparable in their psychosocial functioning. This is consistent with research demonstrating that both male and female perpetrators of bullying are similarly characterised by anger (Aber, Brown, & Jones, 2003; Bosworth, 1999; James et al., 2003), low school connectedness (Bosworth, 1999; Brookmeyer et al., 2006; Dornbusch et al., 2001; Loukas et al., 2009), and depression (Bosworth, 1999). However, these findings are inconsistent with research indicating that male and female bullies differ on their use of problem solving strategies (Cassidy & Taylor, 2005), and levels of self-esteem (Prinstein et al., 2001; Rigby & Cox, 1996). Furthermore, these results are in contrast to previous studies that have documented poorer mental health outcomes in general for female bullies over males (Baldry, 2004; Bond et al., 2001; Craig, 1998; Rigby, 1999).

Previous studies have failed to examine gender differences amongst bullies with respect to anxiety, locus of control, and attachment profiles. Similarly, previous research has not examined gender differences in psychosocial functioning amongst bully/victims. Two opposing explanations are proposed to explain why gender was not found to moderate the relationship between involvement in bullying (as either bully, victim, or bully/victim) and psychosocial functioning.
First, in relation to victimisation, it is hypothesised that gender may be more pronounced in the context of specific types of victimisation that interfere with social goals that are differentially important for males and females. For example, as girls typically focus on relational issues during social interaction, such as establishing close, intimate connections with others, victimisation that harms social connections (i.e., relational types of bullying, such as the spreading of malicious rumours, ostracism) may have a greater impact on girls’ psychosocial functioning than males, who in contrast typically focus on instrumental and dominance-orientated goals. Conversely, victimisation through hitting, pushing, and verbal threats may have a more profound effect on boys’ psychosocial functioning because physical victimisation damages social goals that have been shown to be particularly important to boys, such as sociometric status, domination/leadership, and displays of physical strength.

This logic implies that physical bullying affects boys more strongly than girls because physical bullying may not interfere with girls’ social goals as much as other types of bullying (e.g., relational). However, this conclusion is questionable because it is plausible to argue that physical bullying can have as much impact on a girls’ psychosocial functioning as other forms of non-physical bullying, if not, greater. This is because physical bullying can not only effect a victim psychologically, it also violates a victims physical integrity. Therefore the effect of physical victimisation may have as much impact on boys as girls. However, it can also be argued that since physical bullying violates gender-norms for girls, this form of bullying may have a greater effect on girls.

Indeed, an alternative explanation is that types of bullying experienced that violate gender norms may play a role in differentially impacting males and females. For example, since males are more often socialised using physical activities such as contact sports and rough-and-tumble play from an early age (a type of play that has been found to co-occur and
lead to aggression; Pellegrini, 1995), relative to females, males may not perceive physical bullying as severe or damaging as females might because aggression is a part of their socialisation history and process. In contrast, girls are generally socialised using relational strategies (i.e., through the encouragement of verbal communication, maintenance of close friendships) and are usually engaged in non-physical, relational forms of play (i.e., imaginative or social play at an early age). Thus, for girls, involvement in physical bullying may be experienced as more severe and distressing because it may not have been part of their regular social experience. This logic implies that males experience relational types of bullying as more distressing than physical types of bullying. However, this conclusion is also questionable for two reasons. First, as previously stated, physical types of bullying may interfere with males’ social goals, thereby rendering physical bullying as potentially more distressing than relational types of bullying. Secondly, not all male victims of bullying may have been reared using predominantly physically intrusive/aggressive interaction patterns, and therefore, when physical bullying occurs, it may be experienced as distressing (or more distressing) than relational bullying.

Although the study was designed to enable investigation of different types of bullying, the majority of victims (and bullies) in this study were involved in multiple forms of bullying, and only a minority participants were involved in only a single type of bullying, which were of insufficient number to conduct statistical analysis with sufficient power, and therefore victims (and bullies) were not divided into separate groups based on the type of victimisation experienced.

Nevertheless, on the basis of the two opposing explanations provided, it appears that impairments in psychosocial functioning may be universal amongst those involved in bullying, irrespective of gender and/or the type of bullying one is involved in. This interpretation is
commensurate with the definition of bullying, in that it is always enacted with the intention to cause harm, and does not discriminate across gender or type of bullying. Furthermore, these results do not appear to support the need to tailor anti-bullying interventions to gender. Notwithstanding, findings in this area are equivocal, and this specific finding from this study adds to the existing body of research. Given the present state of mixed findings, perhaps the best approach in dealing with bullying is to ensure that anti-bullying intervention strategies are flexible and are tailored to the needs of the individual, rather than based on assumptions or generalisations about the types of bullying that males and females are differentially involved in. As this study showed, the majority of participants were involved in multiple forms of bullying that can be classified as either overt or covert, or as either verbal, physical, or relational, and thus anti-bullying interventions need to be flexible enough to meet the needs of students involved in a variety of types of bullying.

8.1.5. Self-Debasing vs. Self-Serving Cognitive Distortions: Which Type of Cognitive Distortion has a Stronger Effect on Psychosocial Functioning for Bully/Victims?

Given the dual roles held by bully/victims, both types of cognitive distortion were investigated to determine which type would have the strongest influence on psychosocial functioning. By understanding which types of cognitive distortions have a stronger impact on bully/victims, more targeted anti-bullying interventions can be developed to challenge the cognitive distortions that are most relevant to this group.

The results of this study indicated that in comparison to self-serving cognitive distortions, self-debasing distortions had a stronger effect on the psychosocial functioning of bully/victims. In fact, self-serving cognitive distortions did not mediate any of the variables used to measure psychosocial functioning. The results indicated that for bully/victims, more frequent
self-debasing cognitions were associated with increased depression, and anxiety, and conversely lowered self-esteem. Self-debasing cognitions also significantly mediated bully/victims’ sense of school connectedness, as well as parent and peer attachment. However the magnitude of effect was small and was not statistically stronger than that obtained for externalising cognitions, which as previously mentioned, did not mediate any of the variables measuring psychosocial functioning.

As previously discussed in section 9.1.3.2.1, bully/victims bully others to defend and gain control. In this way, bullying behaviours are conceptualised as a problem-solving tools to stop bullying, rather than as strategies to achieve sociometric status or other instrumental goals, as in ‘pure’ bullying. Thus, while bully/victims may be aware that bullying behaviours are inappropriate, their ability to generate solutions to their problem may be limited, and they may perceive no other way to gain control, other than to bully. This tension between understanding a particular behaviour as inappropriate, and simultaneously engaging in that behaviour is likely to foster emotional tension, or cognitive dissonance, which can be neutralised by secondary cognitive distortions. However, although bully/victims were found to be characterised by self-serving cognitive distortions, especially secondary distortions such as Blaming Others, and Minimising/Mislabling, this research showed that self-serving distortions do not influence psychosocial functioning for bully/victims, and therefore the emotional distress/cognitive dissonance that bully/victims may feel arising out of knowingly engaging inappropriate behaviour (i.e. bullying) may not be attenuated by secondary cognitive distortions, thus leading to higher levels of depression, anxiety, and lower self-esteem.

Furthermore, it is of particular interest that the cognitive profile of bully/victims resembled bullies on externalising cognitions, and victims on internalising cognitions, but that only internalising, and not externalising cognitions mediated psychosocial functioning. One
explanation for this is that bully/victims resemble victims more than bullies on psychosocial variables, which can be considered as internalising in nature (e.g., depression, anxiety), and therefore are more likely to be mediated by internalising, self-debasing cognitions than externalising self-serving cognitions.

That negative internalising cognitions had the strongest effect on bully/victims’ depression, anxiety, and self-esteem is consistent with the themes reflected by the scales used to measure internalising cognitions, namely anxiety and depression. In contrast to victims, the negative internalising cognitions of bully/victims were not found to impact on variables beyond their respective affective referent states. The reason why self-debasing cognitions did not effect the same variety of domains of psychosocial functioning as for victims is speculative, but one possible reason may lie in the past experiences and developmental trajectories of bully/victims. Bully/victims are often the most rejected and most disliked in their school, and are more likely to have more negative family circumstances and parental hostility, such as harsh inconsistent discipline, abuse, and neglect (Bowers et al., 1994; Schwartz, Dodge, & Coie, 1993). Thus, when trying to understand the link between bullying/victimisation and psychosocial functioning in areas other than depression, anxiety, and self-esteem, such as in parent and peer attachment, school connectedness, locus of control, coping styles, and anger, it may be more relevant to investigate cognitions that reflect themes of rejection, abandonment, isolation, and unstable relationships, rather than cognitions uniquely reflective of depression and anxiety. However, this discussion is speculative, and highlights that more research is required to understand the cognitive profile of bully/victims. If their cognitive profile is heavily permeated by parental/familial problems, a school-based anti-bullying intervention and parallel family therapy may be indicated. The efficacy of such an intervention could be investigated in a randomised-control-trial, comprising three groups of bully/victims, (i) bully/victims assigned to
an anti-bullying intervention with parallel family therapy, (ii) bully/victims assigned to a stand-alone anti-bullying intervention, and (iii) bully/victims assigned to a control condition. Groups can then be evaluated post-intervention on changes in frequency of bullying/victimisation and level of psychosocial functioning to determine which level of the intervention is most effective.

8.1.6. Differences in Psychosocial Functioning between Students Involved in Dual Modalities of Bullying and Students Involved in a Single Modality of Bullying

As students can become involved in both ‘real world’ and ‘cyber world’ victimisation, comparisons of psychosocial functioning are important to explore because differences may indicate differential approaches to anti-bullying interventions.

The results of this study showed that students involved in both cyber- and real-world bullying were characterised by significantly poorer psychosocial functioning compared to victims involved in a single modality of bullying. More specifically, victims of dual modalities of victimisation had significantly higher levels of depression, avoidant problem-solving, anger, and lower levels of self-esteem, and parent and peer attachment. These results remained even after account had been made for the possible effects of the frequency of victimisation. There was also a trend found for higher levels of anxiety, lowered school connectedness and problem-solving social support seeking orientated coping strategies.

These results suggest that the experience of dual modalities of victimisation intensifies the negative psychosocial impact of single-modality victimisation. This interpretation is consistent with research showing that fear of unknown cyber-bullying and schoolyard bullying creates a hostile physical school environment where students feel unwelcome and unsafe (Devlin, 1997; Shariff & Strong-Wilson, 2005). Extant research has explored the prevalence of victims involved in dual modalities of bullying (e.g., Smith et al., 2008; Ybarra et al., 2007),
however, to the authors’ knowledge, this is the first study to examine the psychosocial characteristics of victims of dual modalities of bullying and compare with victims of single modality, ‘real world’ bullying.

One of the chief reasons purported to explain why dual modalities of victimisation are associated with poorer psychosocial functioning compared to victims of a single modality is that the combination of ‘cyber world’ and ‘real world’ victimisation may have a cumulative effect on victims, independent of frequency of victimisation, such that students who experience dual forms of bullying may be at greater risk of maladjustment than those whose experiences are limited to one modality. In general, victims of single-modality ‘real world’ bullying demonstrated lower scores on indices of psychosocial functioning compared to ‘real world’ non-victimised participants, and therefore, victimisation in an additional modality may compound psychosocial impairments from single modality victimisation.

In addition, dually victimised students may have pre-existing impairments in psychosocial functioning compared to singly victimised students that may render them more vulnerable and ‘easier’ targets of both modes of victimisation. For example, the more depressed or anxious an individual might appear in physical reality, the more likely they may be considered as ‘soft targets’ for cyber bullying. However, the cross-sectional design of this study does not allow for any firm conclusions to be drawn about the validity of this explanation.

Moreover, being a victim of dual forms of bullying suggests that victims may be bullied by a larger number of people, especially if their cyber attackers are different from their ‘real world’ attackers. In the ‘cyber world’, hundreds of perpetrators can become involved in the abuse, and classmates who may not engage in the bullying at school can hide behind technology to inflict the most serious abuse. This means that at school, dual victims could be
exposed to more perpetrators than singly victimised students, a dynamic that is likely to lead to victims feeling trapped, and correspondingly experiencing poorer psychosocial functioning.

It is noteworthy that as well reporting higher internalising symptoms, dual victims also report significantly more anger. One possible explanation for this finding is that cyber victims may feel that it is unfair that they are subjected to such perverse and intrusive forms of victimisation in places that they may have originally felt safe in, such as in the home environment. Cybervictimisation can be considered as a significant invasion of space and privacy because it can happen anywhere, at anytime. Places away from the school grounds are traditionally seen as a place of respite from bullying. However, when these places outside of school are no longer safe, then victims may feel angry at the loss of sanctuary that they are entitled to at home and away from school grounds. Notwithstanding, it is important to stipulate that students are equally entitled to sanctuary and freedom from bullying on school grounds, but the closer proximity to their peers at school may render individuals to expect that bullying is more likely to occur at school, thus perhaps lowering expectations of safety and sanctuary.

Overall, these results highlight the need to assess and investigate both types of bullying, especially when only one modality of bullying is reported by the victim or brought to the attention of teachers or other school personnel. Furthermore, given that victims of dual modalities of bullying show greater impairments in psychosocial functioning, interventions may need to be more intensive than interventions for victims of a single modality of bullying. The intensity of interventions may include more frequent and more in-depth individual sessions with the victim to address psychological distress, as well as the teaching of effective coping strategies in situations where bullying is difficult to control (e.g., abusive text messages or e-mails from an unknown perpetrator), and making efforts to ensure that the victimised peer has as much peer support as possible.
8.2. Limitations and Future Research

This study relied on self-report as the sole method of data collection. In aggression research, peer nomination is the ‘gold standard’ method for identifying bullies and victims (Hawker & Boulton, 2000; Pellegrini et al., 1999). Being able to confirm the accuracy of the findings through the use of peer, in addition to parent, and teacher reports would allow for more reliable conclusions to be drawn about the bullying status of students. Despite this concern, it must be recognised that if a student perceives that they are being bullied, and that they are experiencing psychosocial problems, then they are in need of assistance, regardless of the objective reality of their bullying situation.

In addition, the time required to complete the questionnaire package was taxing on students’ attention spans. Some participants took up to one hour to complete the questionnaires and some discontinued at various sections due to fatigue. Students were encouraged to take regular breaks to enhance completion; however, this was only effective with some students and was dependent on support received from teachers. Future research may avoid this limitation in a number of ways, such as by using shorter measures or by focusing on a few key variables, thereby reducing the number of questionnaires. However, as this program of research approached bullying from a socio-ecological perspective, it was deemed important to capture a wide range of variables.

Furthermore, the data from this study are cross-sectional, and therefore temporal inferences cannot be made. For example, it cannot be concluded that poor psychosocial functioning caused bullying or that bullying led to a decrease in psychosocial functioning. Longitudinal research is required to make such inferences about causality. In addition, the data from this study were derived from only two schools, which may cast doubt on the generalisability of the findings. However, the prevalence rates of bullying in this study were
generally consistent with previously reported data, which lends support to the generalisability of the results of the current study.

8.3. Conclusion

It is well-established that schoolyard bullying can have a serious negative impact on the mental health of children and adolescents. Common psychosocial correlates of bullying include elevated levels of depression, anxiety, low self-esteem, and decreased levels of peer attachment, school connectedness, and adaptive coping skills. These effects are likely to influence a wide variety of areas in life in a child or adolescent’s life, including academic performance, family relationships, and social skills. In turn, these effects may permeate development into adulthood, and become a larger part of an individual’s identity, which may harness an individual’s full potential to achieve in life. Therefore, effective containment of schoolyard bullying is a critical issue for all individuals involved in the lives of children and adolescents.

This study investigated bullying from a predominately social-cognitive perspective in order to investigate the cognitive mechanisms involved in the establishment and maintenance of involvement in bullying, and its relationship to psychosocial functioning. To best capture a child’s psychosocial functioning, this study adopted a socio-ecological approach by examining factors within the individual, as well as broader variables related to the individual, such as the relationship the individual has with, parents, peers, teachers, and the general school environment. In this way, the results of this study provide valuable information about the interplay between the individual (bully, victim, bully/victim) and a wide range of indices of psychosocial functioning that are related to a range of contextual factors, and the cognitive processes that influence this relationship.
This study showed that in comparison to bullies and bully/victims, victims demonstrated a higher awareness of their status within the bully/victim cycle. Given that recognition of one’s behaviour is a primary step in behaviour change, future research directed towards examining the factors that impede on bullies and bully/victims ability to recognise their status as such will be an important area for further investigation.

Bullies, victims, and bully/victims appear to have cognitive styles that may render them more likely to sustain their respective roles within the bully/victim cycle. Bullies were distinctly characterised by self-serving cognitive distortions that justify and minimise one’s own anti-social behaviour. In contrast, self-debasing cognitive distortions reflective of personal failure and threat were characteristic of victims. Consistent with their dual role as both bully and victim, bully/victims were characterised by both types of distortions.

Converging evidence from this study showed that self-debasing cognitive distortions exert significant effects across a wide range of areas of psychosocial functioning for victims (including cyber victims) and bully/victims (albeit to a lesser extent). In contrast, self-serving cognitive distortions exert significant effects across a limited range of variables, in increasing peer attachment and decreasing school connectedness. Self-serving cognitive distortions did not effect bully/victims’ levels of psychosocial functioning, suggesting that the cognitive profiles of bully/victims as they relate to psychosocial functioning are more aligned with that of victims. Overall, these results suggest that addressing cognitive distortions specific to bullies and victims are likely to be key components of anti-bullying interventions.

Furthermore, gender did not influence the psychosocial functioning of any participants involved in the bully/victim cycle. Whilst these results suggest that gender differences do not exist, examination of specific types of bullying that are known to be more prevalent and more profound among males and females, respectively, may uncover gender differences that may
be important to address in the development of anti-bullying interventions. Notwithstanding, findings in this area remained mixed, and anti-bullying interventions must be flexible enough to address different types of bullying regardless of the gender of those involved.

Finally, this study found that students involved in dual modalities of bullying were characterised by poorer psychosocial functioning compared to students involved in a single modality of bullying. This result suggests that dually victimised students are at an increased risk for psychosocial maladjustment and that these victims need more intense support from their school and home environment. In addition, this result highlights the importance of assessing multiple forms of bullying/victimisation. Dually victimised students may be a particularly vulnerable group and further research is warranted into the characteristics that may predispose them to multiple modes of victimisation and how best to assist them.

Extensive research on the psychosocial correlates of bullying has been undertaken, but few studies have sought to uncover the cognitive factors that play a role in bullying. Such investigations have been undertaken in samples of anti-social and aggressive youth, but relatively few studies have examined the role of cognitive factors in bullying. Although related, aggression and anti-social behaviour are different from bullying on the basis that they are usually motivated by different goals, and therefore it is not always valid to extrapolate findings from the aggression literature to bullying. Research that addresses a combination of cognitive and psychosocial factors is likely to lead to a more holistic understanding of the factors that predispose, precipitate, perpetuate, and protect individuals in bullying. The findings from such studies can then be used to inform the development of effective anti-bullying interventions. The development of anti-bullying is critical in contributing to safe school environments that maximises students’ ability to learn and thrive in their school years and beyond.
REFERENCES


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APPENDICES
Appendix A: Questionnaire Package for Students

Questionnaire package for students

**About the study**

This questionnaire asks you about your experiences of bullying, and your thoughts, feelings, and behaviours about yourself, your friends, your teachers and your parents.

Some of the questions may seem a bit personal, but remember, there are no right or wrong answers, so please respond as honestly as you can. Your answers will remain confidential and please do not discuss them with anyone.

**Instructions**

- Please do not put your name on this questionnaire – this is a completely anonymous questionnaire.
- Please answer all questions as best you can – if you do not understand a question, please raise your hand and somebody will assist you.

**This questionnaire takes between 40 and 60 minutes to complete**

Thank you!
1. What is your age? ________

2. What is your gender? (Please tick)
   □ Male    □ Female

3. Were you born in Australia? (Please tick)
   □ Yes    □ No (Please specify_________________)

4. What is your background? (Please tick all that apply)
   □ Australian
   □ Aboriginal
   □ African (please specify e.g. Sudanese, Nigerian etc) ____________
   □ Asian (please specify e.g. Chinese, Vietnamese etc) ____________
   □ European (please specify e.g. Greek, Italian etc) ____________
   □ Pacific Islander (please specify e.g. Maori, Samoan etc) __________
   □ Other: ____________________

5. What is your home-group? ________

6. What is your home postcode? 3 _ _ _

7. What is your family like? (Please tick all that apply)
   □ Both parents live with you
   □ Your parents are divorced
   □ You live with your mum only (always or mostly)
   □ You live with your dad only (always or mostly)
   □ You live with your mum and step-dad
   □ You live with your dad and step-mum
   □ Other (please specify)______________________________

8. Do you think you bully other students? (Please tick):  
   □ Yes  □ No  □ Maybe/don’t know

9. Do you think you are bullied by other students? (Please tick) 
   □ Yes  □ No  □ Maybe/don’t know

10. Do you have a mobile phone? (Please tick) 
    □ Yes  □ No
Questionnaire 1

IMPORTANT: PLEASE READ

Here are some questions about being bullied by other students. First we explain the word bullying.

We say a student is being bullied when another student, or several other students:
- Say mean and hurtful things or make fun of him or her or call him or her mean and hurtful names
- Completely ignore or leave him or her out from their group of friends or leave him or her out of things on purpose
- Hit, kick, push, shove around, or lock him or her inside a room
- Tell lies or spread false rumours about him or her or send mean notes and try to make other students dislike him or her
- As well as other hurtful things like that, including being teased in a mean or hurtful way.

When we talk about bullying, these things happen repeatedly, and it is difficult for the student being bullied to defend himself or herself. We also call it bullying, when a student is teased repeatedly in a mean and hurtful way.

But we don’t call it bullying when the teasing is done in a friendly and playful way. Also, it is not bullying when two students of about equal strength or power argue or fight.

INSTRUCTIONS
Now read the following questions and answer each question by ticking the box that best describes how you feel. Only mark one of the boxes.

Most of the questions are about your life in school in the past couple of months, that is, the period from start of school after the Summer holidays until now. So when you answer, you should think of how it has been during the past 2 or 3 months and not only how it is just now.

Part 1:

| How often have you been bullied at school in the past couple of months | □ I haven’t been bullied in the past couple of months |
| | □ It has only happened once or twice |
| | □ 2 or 3 times a month |
| | □ about once a week |
| | □ several times a week |

| How do you like school? | □ I dislike school very much |
| | □ I dislike school |
| | □ I neither like or dislike school |
| | □ I like school |
| | □ I like school very much |

| How many good friends do you have in your classes? | □ none |
| | □ I have 1 good friend in my class(es) |
| | □ I have 2 or 3 good friends in my class(es) |
| | □ I have 4 or 5 good friends in my class(es) |
| | □ I have 6 or more good friends in my class(es) |
Have you been bullied at school in the past couple of months in one or more of the following ways?
Please answer all questions

<table>
<thead>
<tr>
<th>Anti-bullying measure</th>
<th>Frequency Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was called mean names, was made fun of, or teased in a hurtful way</td>
<td></td>
</tr>
</tbody>
</table>
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| Other students left me out of things on purpose, left me out of from their group of friends, or completely ignored me | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| I was hit, kicked, pushed, shoved around, or locked in doors | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| Other students told lies or spread false rumours about me and tried to make other students dislike me | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| I had money or other things taken away from me or damaged | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| I was threatened or forced to do things I didn’t want to do | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| I was bullied with mean names or comments about my race or colour | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| I was bullied with mean names or comments about my religion | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| I was bullied with mean names or comments about my disability | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| I was bullied with mean names, comments, or gestures with sexual meaning | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month
  - about once a week
  - several times a week |
| I was bullied with mean names or comments about my ability | 
  - I haven’t been bullied in the past couple of months
  - It has only happened once or twice
  - 2 or 3 times a month |
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was bullied with the use of mobile phones</td>
<td>□ I haven’t been bullied in the past couple of months</td>
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<tr>
<td></td>
<td>□ It has only happened once or twice</td>
</tr>
<tr>
<td></td>
<td>□ 2 or 3 times a month</td>
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<tr>
<td></td>
<td>□ about once a week</td>
</tr>
<tr>
<td></td>
<td>□ several times a week</td>
</tr>
<tr>
<td>I was bullied another way</td>
<td>□ I haven’t been bullied in the past couple of months</td>
</tr>
<tr>
<td></td>
<td>□ It has only happened once or twice</td>
</tr>
<tr>
<td></td>
<td>□ 2 or 3 times a month</td>
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<tr>
<td></td>
<td>□ about once a week</td>
</tr>
<tr>
<td></td>
<td>□ several times a week</td>
</tr>
<tr>
<td><strong>In this case, please write in what way:</strong></td>
<td></td>
</tr>
<tr>
<td>In which classes is the student or students who bully you?</td>
<td>□ I haven’t been bullied in the past couple of months</td>
</tr>
<tr>
<td></td>
<td>□ in my class</td>
</tr>
<tr>
<td></td>
<td>□ in a different class but same year</td>
</tr>
<tr>
<td></td>
<td>□ in a higher year</td>
</tr>
<tr>
<td></td>
<td>□ in a lower year</td>
</tr>
<tr>
<td></td>
<td>□ in different years</td>
</tr>
<tr>
<td>Have you been bullied by boys or girls?</td>
<td>□ I haven’t been bullied in the past couple of months</td>
</tr>
<tr>
<td></td>
<td>□ mainly by 1 girl</td>
</tr>
<tr>
<td></td>
<td>□ by several girls</td>
</tr>
<tr>
<td></td>
<td>□ mainly by 1 boy</td>
</tr>
<tr>
<td></td>
<td>□ by several boys</td>
</tr>
<tr>
<td></td>
<td>□ by both boys and girls</td>
</tr>
<tr>
<td>By how many students have you usually been bullied?</td>
<td>□ I haven’t been bullied in the past couple of months</td>
</tr>
<tr>
<td></td>
<td>□ mainly by 1 student</td>
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<tr>
<td></td>
<td>□ by a group of 2-3 students</td>
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<td></td>
<td>□ by a group of 4-9 students</td>
</tr>
<tr>
<td></td>
<td>□ by a group of more than 9 students</td>
</tr>
<tr>
<td></td>
<td>□ by several different students or group of students</td>
</tr>
<tr>
<td>How long has the bullying lasted?</td>
<td>□ I haven’t been bullied at school in the past couple of months</td>
</tr>
<tr>
<td></td>
<td>□ it lasted one or two weeks</td>
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<td></td>
<td>□ it lasted about a month</td>
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<td></td>
<td>□ it has lasted about 6 months</td>
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<td></td>
<td>□ It has lasted about a year</td>
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<tr>
<td></td>
<td>□ It has gone on for several years</td>
</tr>
<tr>
<td>I was bullied another way</td>
<td>□ I haven’t been bullied in the past couple of months</td>
</tr>
<tr>
<td></td>
<td>□ It has only happened once or twice</td>
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<td></td>
<td>□ 2 or 3 times a month</td>
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<td>□ about once a week</td>
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<td></td>
<td>□ several times a week</td>
</tr>
<tr>
<td><strong>In this case, please write in what way:</strong></td>
<td></td>
</tr>
<tr>
<td>In which classes is the student or students who bully you?</td>
<td>□ I haven’t been bullied in the past couple of months</td>
</tr>
<tr>
<td></td>
<td>□ in my class</td>
</tr>
<tr>
<td></td>
<td>□ in a different class but same year</td>
</tr>
<tr>
<td></td>
<td>□ in a higher year</td>
</tr>
<tr>
<td></td>
<td>□ in a lower year</td>
</tr>
<tr>
<td></td>
<td>□ in different years</td>
</tr>
<tr>
<td>Have you been bullied by boys or girls?</td>
<td>□ I haven’t been bullied in the past couple of months</td>
</tr>
<tr>
<td></td>
<td>□ mainly by 1 girl</td>
</tr>
<tr>
<td></td>
<td>□ by several girls</td>
</tr>
<tr>
<td></td>
<td>□ mainly by 1 boy</td>
</tr>
</tbody>
</table>
By how many students have you usually been bullied?
- □ by several boys
- □ by both boys and girls
- □ I haven’t been bullied in the past couple of months
- □ mainly by 1 student
- □ by a group of 2-3 students
- □ by a group of 4-9 students
- □ by a group of more than 9 students
- □ by several different students or group of students

How long has the bullying lasted?
- □ I haven’t been bullied at school in the past couple of months
- □ it lasted one or two weeks
- □ it lasted about a month
- □ it has lasted about 6 months
- □ It has lasted about a year
- □ It has gone on for several years

Have you told anyone that you have been bullied at school in the last couple of months?
- □ haven’t been bullied at school in the past couple of months
  (if tick this box, skip to the next question)
- □ I have been bullied but I have not told anyone (if you tick this box, skip to the next question)
- □ I have been bullied and I have told someone about it (continue below)

<table>
<thead>
<tr>
<th>Have you told (that you have been bullied)....</th>
<th>(please circle Yes or No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your class teacher</td>
<td>Yes</td>
</tr>
<tr>
<td>Another adult at school (a different teacher, a principal, school nurse, school caretaker, school psychologist, welfare co-ordinator etc)</td>
<td>Yes</td>
</tr>
<tr>
<td>Your parent/guardian</td>
<td>Yes</td>
</tr>
<tr>
<td>Your brother(s)/sister(s)</td>
<td>Yes</td>
</tr>
<tr>
<td>Your friend(s)</td>
<td>Yes</td>
</tr>
<tr>
<td>Somebody else</td>
<td>Yes</td>
</tr>
</tbody>
</table>

If yes, who:

How often do the teachers or other adults at school try to put a stop to it when a student is being bullied at school?
- □ Almost never
- □ Once in a while
- □ Sometimes
- □ Often
- □ Almost Always

How often do other students try to put a stop to it when a student is being bullied at school?
- □ Almost never
- □ Once in a while
- □ Sometimes
- □ Often
- □ Almost Always

Has any adult at home contacted the school to try to stop your being bullied at school in the past couple of months?
- □ I haven’t been bullied at school in the past couple of months
- □ No, they haven’t contacted the school
- □ Yes, they have contacted the school once
- □ Yes, they have contacted the school several times

When you see a student your age being bullied, what do you think or feel?
- □ That is probably what he or she deserves
- □ I don’t feel much
- □ I feel a bit sorry for him or her
- □ I feel sorry for him or her and want to help him or her
**Part 2: Have you bullied another student(s) at school in the past couple of months in one or more of the following ways? Please answer all questions**

| How often have you taken part in bullying another student at school in the past couple of months?                                                                 | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I called another student(s) mean names, made fun of or teased him or her in a hurtful way                                           | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I kept him or her out of things on purpose, excluded him or her from my group of friends or completely ignored him or her           | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I hit, kicked, pushed and shoved him or her around or locked him or her indoors                                                 | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I spread false rumors about him or her and tried to make others dislike him or her                                              | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I took money or other things from him or her or damaged his or her belongings                                                  | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I threatened or forced him or her to do things he or she didn't want to do                                                      | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I bullied him or her with mean names or comments about his or her race or colour                                                 | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I bullied him or her with mean names or comments about his or her religion                                                    | □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| □ I haven't bullied another student(s) at school in the past couple of months  
  □ it has only happened once or twice  
  □ 2 or 3 times a month  
  □ about once a week  
  □ several times a week |
| I bullied him or her with mean names or comments about his or her disability | □ I haven't bullied another student(s) at school in the past couple of months  
□ it has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week |
| I bullied him or her with mean names, comments, or hand gestures with a sexual meaning | □ I haven't bullied another student(s) at school in the past couple of months  
□ it has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week |
| I bullied him or her with mean names or comments about his or her ability | □ I haven't bullied another student(s) at school in the past couple of months  
□ it has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week |
| I bullied him or her with the use of mobile phones | □ I haven't bullied another student(s) at school in the past couple of months  
□ it has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week |
| I bullied him or her with the use of computers | □ I haven't bullied another student(s) at school in the past couple of months  
□ it has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week |
| I bullied him or her in another way | □ I haven't bullied another student(s) at school in the past couple of months  
□ it has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week  
**If yes, in what way did you bully?** |
**Questionnaire 2**
This section asks you about your experiences with mobile phones and computers.

**Have you been bullied at school in the past couple of months in one or more of the following ways? Please answer all questions**

<table>
<thead>
<tr>
<th>Type of Bullying</th>
<th>Frequency Options</th>
<th>What did you do with it?</th>
<th>Did you know who it was from?</th>
</tr>
</thead>
</table>
| Threatening or Abusive Text Messages on Mobile | □ I haven’t been bullied in the past couple of months  
□ It has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week | □ Deleted it  
□ Showed or told a friend  
□ Showed or told a parent?  
□ Showed or told a teacher?  
□ Left it  
□ Other: ____________ | □ Yes □ No |
| Threatening or Abusive Emails | □ I haven’t been bullied in the past couple of months  
□ It has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week | □ Deleted it  
□ Showed or told a friend  
□ Showed or told a parent?  
□ Showed or told a teacher?  
□ Left it  
□ Other: ____________ | □ Yes □ No |
| Threatening or Abusive Messages in a Chat Room | □ I haven’t been bullied in the past couple of months  
□ It has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week | □ Deleted it  
□ Showed or told a friend  
□ Showed or told a parent?  
□ Showed or told a teacher?  
□ Left it  
□ Other: ____________ | □ Yes □ No |
| Threatening or Abusive Messages through Instant Messaging (e.g., MSN Messenger, Yahoo! Messenger, AOL Messenger etc.) | □ I haven’t been bullied in the past couple of months  
□ It has only happened once or twice  
□ 2 or 3 times a month  
□ about once a week  
□ several times a week | □ Deleted it  
□ Showed or told a friend  
□ Showed or told a parent?  
□ Showed or told a teacher?  
□ Left it  
□ Other: ____________ | □ Yes □ No |
Somebody wrote nasty or abusive things about me on a website (e.g. on a blog, MySpace, Facebook etc)

- □ I haven’t been bullied in the past couple of months
- □ It has only happened once or twice
- □ 2 or 3 times a month
- □ about once a week
- □ several times a week

What did you do with it?

- □ Deleted it
- □ Showed or told a friend
- □ Showed or told a parent?
- □ Showed or told a teacher?
- □ Left it
- □ Other: _______________

Did you know who wrote it?

- □ Yes □ No

Somebody sent me threatening or rude picture/photos/video clips to my mobile

- □ I haven’t been bullied in the past couple of months
- □ It has only happened once or twice
- □ 2 or 3 times a month
- □ about once a week
- □ several times a week

What did you do with it?

- □ Deleted it
- □ Showed or told a friend
- □ Showed or told a parent?
- □ Showed or told a teacher?
- □ Left it
- □ Other: _______________

Did you know who it was from?

- □ Yes □ No

### Have you bullied another student(s) at school in the past couple of months in one or more of the following ways? Please answer all questions

<table>
<thead>
<tr>
<th>Activity</th>
<th>Frequency Choices</th>
<th>Who Did You Tell?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I sent threatening or abusive text messages to another student’s mobile</td>
<td>□ I haven’t bullied another student in the past couple of months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ It has only happened once or twice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ 2 or 3 times a month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ about once a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ several times a week</td>
<td></td>
</tr>
<tr>
<td>I sent someone threatening or abusive emails</td>
<td>□ I haven’t bullied another student in the past couple of months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ It has only happened once or twice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ 2 or 3 times a month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ about once a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ several times a week</td>
<td></td>
</tr>
<tr>
<td>I sent someone threatening or abusive messages in a chat room</td>
<td>□ I haven’t bullied another student in the past couple of months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ It has only happened once or twice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ 2 or 3 times a month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ about once a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ several times a week</td>
<td></td>
</tr>
<tr>
<td>I sent someone threatening or abusive messages through instant messaging (e.g., MSN Messenger, Yahoo! Messenger, AOL Messenger etc).</td>
<td>□ I haven’t bullied another student in the past couple of months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ It has only happened once or twice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ 2 or 3 times a month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ about once a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ several times a week</td>
<td></td>
</tr>
<tr>
<td>I wrote nasty or abusive things about someone on a website (e.g. on a blog, MySpace, Facebook etc)</td>
<td>□ I haven’t bullied another student in the past couple of months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ It has only happened once or twice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ 2 or 3 times a month</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ about once a week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ several times a week</td>
<td></td>
</tr>
</tbody>
</table>
| I sent someone threatening or rude pictures/photos/video clips to their phone | □ I haven’t bullied another student in the past couple of months  
| | □ It has only happened once or twice  
| | □ 2 or 3 times a month  
| | □ about once a week  
| | □ several times a week |
Questionnaire 3

Each statement in this questionnaire may describe how you think about things in life. Read each statement carefully, then ask yourself, "Is it fair to say that this statement describes my thinking during the last 6 months?" and circle your response

1. **People should try to work on their problems**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

2. **I can’t help losing my temper a lot**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

3. **Sometimes you have to lie to get what you want**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

4. **Sometimes I get bored**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

5. **People need to be roughed up once in a while**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

6. **If I made a mistake, it’s because I got mixed up with the wrong crowd**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

7. **If I see something I like, I take it**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

8. **You can’t trust people because they will always lie to you**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

9. **I am generous with my friends**
   - Agree, Agree, Agree, Disagree, Disagree, Disagree
   - Strongly, Slightly, Slightly, Strongly

10. **When I get mad, I don’t care who gets hurt**
    - Agree, Agree, Agree, Disagree, Disagree, Disagree
    - Strongly, Slightly, Slightly, Strongly

11. **If someone leaves a car unlocked, they are asking to have it stolen**
    - Agree, Agree, Agree, Disagree, Disagree, Disagree
    - Strongly, Slightly, Slightly, Strongly

12. **You have to get even with people who don’t show you respect**
    - Agree, Agree, Agree, Disagree, Disagree, Disagree
    - Strongly, Slightly, Slightly, Strongly

13. **Sometimes I gossip about other people**
    - Agree, Agree, Agree, Disagree, Disagree, Disagree
    - Strongly, Slightly, Slightly, Strongly

14. **Everyone lies, it’s no big deal**
    - Agree, Agree, Agree, Disagree, Disagree, Disagree
    - Strongly, Slightly, Slightly, Strongly
15. It’s no use trying to stay out of fights
   Agree  Agree  Agree  Disagree  Disagree  Disagree
   Strongly  Slightly  Slightly  Strongly

16. Everyone has the right to be happy
   Agree  Agree  Agree  Disagree  Disagree  Disagree
   Strongly  Slightly  Slightly  Strongly

17. If you know you can get away with it, only a fool wouldn’t steal
   Agree  Agree  Agree  Disagree  Disagree  Disagree
   Strongly  Slightly  Slightly  Strongly

18. No matter how hard I try, I can’t help getting in trouble
   Agree  Agree  Agree  Disagree  Disagree  Disagree
   Strongly  Slightly  Slightly  Strongly

19. Only a coward could ever walk away from a fight
   Agree  Agree  Agree  Disagree  Disagree  Disagree
   Strongly  Slightly  Slightly  Strongly

20. I have sometimes said something bad about a friend
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

21. It’s OK to tell a lie if someone is dumb enough to fall for it
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

22. If I really want something, it doesn’t matter how I get it
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

23. If you don’t push people around, you will always get picked on
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

24. Friends should be honest with each other
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

25. If a store or home owner gets robbed, it’s really their fault for not having better security
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

26. People force you to lie if they ask too many questions
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

27. I have tried to get even with someone
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

28. You should get what you need, even if it means someone has to get hurt
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly

29. People are always trying to hassle me
    Agree  Agree  Agree  Disagree  Disagree  Disagree
    Strongly  Slightly  Slightly  Strongly
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>30.</td>
<td>Stores make enough money that it’s OK to just take things you need</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>31.</td>
<td>In the past, I have lied to get myself out of trouble</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>32.</td>
<td>You should hurt people first, before they hurt you</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>33.</td>
<td>A lie doesn’t really matter if you don’t know that person</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>34.</td>
<td>It’s important to think of other people’s feelings</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>35.</td>
<td>You might as well steal. If you don’t take it, somebody else will</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>36.</td>
<td>People are always trying to start fights with me</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>37.</td>
<td>Rules are mostly meant for other people</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>38.</td>
<td>I have covered up things that I have done</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>39.</td>
<td>If someone is careless enough to lose a wallet, they deserve to have it stolen</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>40.</td>
<td>Everybody breaks the law, it’s no big deal</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>41.</td>
<td>When friends need you, you should be there for them</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>42.</td>
<td>Getting what you need is the only important thing</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>43.</td>
<td>You might as well steal. People would steal from you if they had the chance</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td>44.</td>
<td>If people don’t cooperate with me, it’s not my fault if someone gets hurt</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>45.</td>
<td>I have done bad things that I haven’t told people about</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>46.</td>
<td>When I lose my temper, it’s because people try to make me mad</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>47.</td>
<td>Taking a car doesn’t really hurt anyone if nothing happens to the car and the owner gets it back</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>48.</td>
<td>Everybody needs help once in a while</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>49.</td>
<td>I might as well lie – when I tell the truth, people don’t believe me anyway</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>50.</td>
<td>Sometimes you have to hurt someone if you have a problem with them</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>51.</td>
<td>I have taken things without asking</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>52.</td>
<td>If I lied to someone, that’s my business</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>53.</td>
<td>Everybody steals- you might as well get your share</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
<tr>
<td>54.</td>
<td>If I really want to do something, I don’t care if it’s legal or not</td>
<td>Agree</td>
<td>Agree</td>
<td>Agree</td>
<td>Disagree</td>
</tr>
<tr>
<td></td>
<td>Strongly</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Strongly</td>
<td></td>
</tr>
</tbody>
</table>
**Questionnaire 4**

Listed below are some thoughts that young people have said pop into their heads. Please read each thought carefully and decide how often, if at all, each thought popped into your head over the past week. Circle your answer using the numbers on the right.

<table>
<thead>
<tr>
<th>Say to yourself, “Over the past week I thought...”</th>
<th>Not at all</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Often</th>
<th>All the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kids will think I'm stupid</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have the right to take revenge on people if they deserve it</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can't do anything right</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm going to have an accident</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other kids are stupid</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm worried that I'm going to get teased</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm going crazy</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kids are going to laugh at me</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm going to die</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most people are against me</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am worthless</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My mum or dad are going to get hurt</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nothing ever works out for me anymore</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm going to look silly</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I won't let anyone get away with picking on me</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm scared of losing control</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It's my fault that things have gone wrong</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People are thinking bad things about me</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If someone hurts me, I have the right to hurt them back</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm going to get hurt</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm afraid of what other kids will think of me</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some people deserve what they get</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I've made such a mess of my life</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Something awful is going to happen</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I look like an idiot</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'll never be as good as other people are</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I always get blamed for things that are not my fault</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am a failure</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other kids are making fun of me</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life is not worth living</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Everyone is staring at me</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm afraid I will make a fool of myself</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I'm scared that somebody might die</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will never overcome my problems</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People always try to get me into trouble</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is something very wrong with me</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some people are bad</td>
<td>0 1 2 3 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>Sometimes</td>
<td>Fairly often</td>
<td>Often</td>
<td>All the time</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>--------------</td>
<td>-------</td>
<td>--------------</td>
</tr>
<tr>
<td>I hate myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Say to yourself, “Over the past week I thought…”</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Something will happen to someone I care about</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Bad people deserve to get punished</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Questionnaire 5
Below is a list of statements about your general feelings about yourself.

If you **Strongly Agree**, circle **SA**.
If you **Agree**, circle **A**.
If you **Disagree**, circle **D**.
If you **Strongly Disagree**, circle **SD**.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the whole, I am satisfied with myself.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>At times, I think I am no good at all.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>I feel that I have a number of good qualities.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>I am able to do things as well as most other people.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>I feel I do not have much to be proud of.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>I certainly feel useless at times.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>I feel that I’m a person who is just as worthy as others.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>I wish I could have more respect for myself.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>Overall, I feel like I am a failure.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
<tr>
<td>I take a positive attitude toward myself.</td>
<td>SA</td>
<td>A</td>
<td>D</td>
<td>SD</td>
</tr>
</tbody>
</table>
**Questionnaire 6**
For each of the statements that follow, circle the number that best describes you in the last six months. For each statement mark one of the following descriptions:

<table>
<thead>
<tr>
<th>When I have a problem I...</th>
<th>Never</th>
<th>Hardly</th>
<th>Sometimes</th>
<th>Often</th>
<th>Usually</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I ask my friends to support me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I develop a plan about how to solve the problem before doing anything</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I avoid the problem by spending more time alone</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I go to a friend for advice on how to solve the problem</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I think about what needs to be done</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I avoid the problem by wishing that people would leave me alone</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I set goals for myself to deal with the problem</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I tell my fears and worries to a friend</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I avoid the problem by sleeping more than usual</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I make a plan of action about what I will do</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I avoid the problem by pretending that there is no problem</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I avoid the problem by staying away from other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I go to a friend to help me feel better</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I try different ways to solve the problem until I find one that works</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I avoid the problem by watching television more than usual</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Questionnaire 7
Next here are some sentences that tell how some people think and feel about themselves. Read each sentence carefully and **circle the word Yes if you think the sentence is true about you. Circle he word No if you think it is not true about you.**

<table>
<thead>
<tr>
<th>Statement</th>
<th>YES/NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have trouble making up my mind</td>
<td></td>
</tr>
<tr>
<td>I get nervous when things do not go the right way for me</td>
<td></td>
</tr>
<tr>
<td>Others seem to do things easier than I can</td>
<td></td>
</tr>
<tr>
<td>I like everyone I know</td>
<td></td>
</tr>
<tr>
<td>Often I have trouble getting my breath</td>
<td></td>
</tr>
<tr>
<td>I worry a lot of the time</td>
<td></td>
</tr>
<tr>
<td>I am afraid of a lot of things</td>
<td></td>
</tr>
<tr>
<td>I am always kind</td>
<td></td>
</tr>
<tr>
<td>I get mad easily</td>
<td></td>
</tr>
<tr>
<td>I worry about what my parents will say to me</td>
<td></td>
</tr>
<tr>
<td>I feel that others do not like the way I do things</td>
<td></td>
</tr>
<tr>
<td>I always have good manners</td>
<td></td>
</tr>
<tr>
<td>It is hard for me to get to sleep at night</td>
<td></td>
</tr>
<tr>
<td>I worry about what other people think about me</td>
<td></td>
</tr>
<tr>
<td>I feel alone even when there are people with me</td>
<td></td>
</tr>
<tr>
<td>I am always good</td>
<td></td>
</tr>
<tr>
<td>Often I feel sick in my stomach</td>
<td></td>
</tr>
<tr>
<td>My feelings get hurt easily</td>
<td></td>
</tr>
<tr>
<td>My hands feel sweaty</td>
<td></td>
</tr>
<tr>
<td>I am always nice to everyone</td>
<td></td>
</tr>
<tr>
<td>I am tired a lot</td>
<td></td>
</tr>
<tr>
<td>I worry about what is going to happen</td>
<td></td>
</tr>
<tr>
<td>Other people are happier than I</td>
<td></td>
</tr>
<tr>
<td>I tell the truth every single time</td>
<td></td>
</tr>
<tr>
<td>I have bad dreams</td>
<td></td>
</tr>
<tr>
<td>My feelings get hurt easily when I am hassled</td>
<td></td>
</tr>
<tr>
<td>I feel someone will tell me I do things the wrong way</td>
<td></td>
</tr>
<tr>
<td>I never get angry</td>
<td></td>
</tr>
<tr>
<td>I wake up scared some of the time</td>
<td></td>
</tr>
<tr>
<td>I worry when I go to bed at night</td>
<td></td>
</tr>
<tr>
<td>It is hard for me to keep my mind on my schoolwork</td>
<td></td>
</tr>
<tr>
<td>I never say things I shouldn’t</td>
<td></td>
</tr>
<tr>
<td>I wiggle in my seat a lot</td>
<td></td>
</tr>
<tr>
<td>I am nervous</td>
<td></td>
</tr>
<tr>
<td>A lot of people are against me</td>
<td></td>
</tr>
<tr>
<td>I never lie</td>
<td></td>
</tr>
<tr>
<td>I often worry about something bad happening to me</td>
<td></td>
</tr>
</tbody>
</table>
### Questionnaire 8

**Instructions:** Listed below are some sentences about how you feel. Read each sentence and decide how often you feel this way. Decide if you feel this way: **almost never**, **hardly ever**, **sometimes**, or **most of the time**. Circle the number that best describes how you really feel. Remember, there are no right or wrong answers. Just choose the answer that tells you how you usually feel.

<table>
<thead>
<tr>
<th>Feeling</th>
<th>Almost never</th>
<th>Hardly Ever</th>
<th>Sometimes</th>
<th>Most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel happy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I worry about school</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel lonely</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel my parents don’t like me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel important</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like hiding from people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel sad</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like crying</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel that no one cares about me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like having fun with other students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel sick</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel loved</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like running away</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like hurting myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel that other students don’t like me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel upset</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like life is unfair</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel tired</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel I am bad</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel I am no good</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel sorry for myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel mad about things</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like talking to other students</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have trouble sleeping</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like having fun</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel worried</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I get stomach aches</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel bored</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I like eating meals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel like nothing I do helps anymore</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
**Questionnaire 9**

Please read the following statements and rate how much you agree with the statements:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Nor Agree or Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>You feel close to people at your school</td>
<td>SD</td>
<td>D</td>
<td>NAD</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>You feel like you are part of your school</td>
<td>SD</td>
<td>D</td>
<td>NAD</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>You are happy to be at your school</td>
<td>SD</td>
<td>D</td>
<td>NAD</td>
<td>A</td>
<td>SA</td>
</tr>
<tr>
<td>The teachers at your school treat students fairly</td>
<td>SD</td>
<td>D</td>
<td>NAD</td>
<td>A</td>
<td>SA</td>
</tr>
</tbody>
</table>

Since school started this year, how often have you had trouble getting along with your teachers? (Please circle)

- Never
- Just a few times
- About once a week
- Almost everyday
- Everyday

How much do you feel that your teachers care about you? (Please circle)

- Not at all
- Very little
- Somewhat
- Quite a bit
- Very much
Questionnaire 10
Circle the number that best describes you when you are angry

<table>
<thead>
<tr>
<th>When I am angry, I...</th>
<th>Hardly Ever</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hit right back if someone hits me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Cheat to get even</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Try to work the problem without fighting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Will hurt the person who upset me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Leave class without permission</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Act without thinking</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Try to understand the feelings of others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Bully others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Have self-control to walk away to avoid a fight</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Will find a weapon to deliberately hurt someone</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Have thoughts about starting fires</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Have thoughts about how to kill the person who made me angry</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Do not plan to use a weapon to hurt someone</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Think about how to make peace with the person who upset me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Have a hot temper</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Plan to destroy property</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Talk loudly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Plan to fight</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Have difficulty controlling my temper</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Plan how to talk nicely to avoid arguing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Just can’t sit still</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Will hurt myself to get back at others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Try to hurt someone on purpose</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Pick fights with anyone</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Use anything as a weapon to fight</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Have enough self-control not to hit back</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Set fires on purpose</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Can’t focus on anything else</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Ignore it when called bad names</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Take it out on animals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Get into trouble because of my temper</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Avoid people to stay out of trouble</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Feel relieved after hurting the person who upset me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Talk too much</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Run away from home</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Walk away to avoid fighting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Enjoy hitting and kicking people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Get into trouble with the police</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Hardly Ever</td>
<td>Sometimes</td>
<td>Often</td>
<td>Very Often</td>
</tr>
<tr>
<td>-----------------------------------------------------------------</td>
<td>-------------</td>
<td>-----------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Still make good choices</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Break rules</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Can ignore it when others put me down</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
**Questionnaire 11:**
This questionnaire is about how you feel about your friends and parents. Please read the following statements and circle how much you agree with each

**If you feel you have a very different relationship with your mother and father answer these questions based on the parent who has 'most influenced' you**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Always true</th>
<th>Often true</th>
<th>Sometimes true</th>
<th>Rarely true</th>
<th>Never true</th>
</tr>
</thead>
<tbody>
<tr>
<td>I tell my parents about my problems and troubles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My parents help me to understand myself better</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>If my parents know something is bothering me, they ask me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My parents have their own problems, so I don’t bother them with mine</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My parents respect my feelings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>When I’m angry about something, my parents try to be understanding</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I wish I had different parents</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My parents accept me as I am</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I don’t get much attention at home</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I get easily upset at home</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Talking over my problems with my parents makes me feel ashamed or foolish</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I feel angry with my parents</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

For this part, answer these questions based on your closest friends

<table>
<thead>
<tr>
<th>Statement</th>
<th>Always true</th>
<th>Often true</th>
<th>Sometimes true</th>
<th>Rarely true</th>
<th>Never true</th>
</tr>
</thead>
<tbody>
<tr>
<td>My friends encourage me to talk about my difficulties</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My friends are concerned about my well being</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I tell my friends about my problems and troubles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I like to get my friend’s point of view on things I’m concerned about</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My friends listen to what I have to say</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I feel my friends are good friends</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I wish I had different friends</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>When I am angry about something, my friends try to be understanding</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I get upset at lot more than my friends know about</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I feel alone or apart when I am with my friends</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>It seems as if my friends are irritated with me for no reason</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Talking over my problems with friends makes me feel ashamed or foolish</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Questionnaire 12**

**Instructions:** Think about the things that happen in your life and please rate how much you agree with the following statements

<table>
<thead>
<tr>
<th></th>
<th>Agree Strongly</th>
<th>Agree</th>
<th>Agree Slightly</th>
<th>Disagree Slightly</th>
<th>Disagree</th>
<th>Disagree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other people and events control my life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Most good things that happen to me are the result of my own actions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My future is mostly in the hands of other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>What I do and how I do it is what will mostly effect my success in life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>External things (things outside me) mostly control my life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>If I succeed in life it will be because of my own efforts</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Luck and/or other people and events mostly control my life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My own efforts and actions are what will determine my future</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Appendix B: Plain Language statement (Student)

INVITATION TO PARTICIPATE IN A RESEARCH PROJECT
PROJECT INFORMATION STATEMENT

Project Title:
Schoolyard bullying: An examination of individual differences in thoughts, feelings, and behaviours in adolescents and young adults

Investigators:
- Miss Geri Abdilla, (Clinical Psychology Doctoral student, RMIT University, g.abdilla@student.rmit.edu.au, 9925 7376)
- Dr David Smith (Project Supervisor: Senior Lecturer, Psychology, RMIT University, david.smith@rmit.edu.au, 9925-7523)

Dear student,

You are invited to participate in a research project being conducted by RMIT University. This information sheet describes the project in straightforward language, or ‘plain English’. Please read this sheet carefully and be confident that you understand its contents before deciding whether to participate. If you have any questions about the project, please ask one of the investigators.

Who is involved in this research project? Why is it being conducted?

My name is Geri Abdilla and I am a student at RMIT University from the Division of Psychology. I am conducting a project to explore school bullying. When I finish my project it will be part of my Doctoral degree. My supervisor, Dr David Smith, helps me with my project.

This project has been approved by the RMIT Human Research Ethics Committee and the Department of Education Research Office.

Why have you been approached?

Your school was chosen at random from a database of schools in metropolitan Melbourne.

Your school principal has given me permission to send you this letter to tell you about my project. Once you have read the letter you can decide if you would like to take part. You can talk to your teachers and/or parents about the project too.

What is the project about? What are the questions being addressed?

This project is about your opinions and/or your experiences of different types of bullying, such as physical, verbal and cyber bullying. Even if you don’t think you’re involved or have been involved in bullying in any way, your thoughts about it would still be very useful and valuable.
The project is also about exploring your thoughts and feelings about yourself, your peers, your parents and your school. I am hoping to have at least 500 students participate in my research.

The questions being addressed include

- What are the attitudes of students towards physical, verbal and cyber forms of bullying?
- How do different types of bullies (either physical/verbal/cyber) think and feel about themselves and others?
- How do students who experience bullying (either physical/verbal/cyber) think and feel about themselves and others?
- What characteristics help students to cope with experiences of bullying?
- What are the differences between males and females when it comes to bullying?

**If I agree to participate, what will I be required to do?**

If you want to be part of the project, for one of your class periods, I would ask you to read and answer some questions about school bullying, as well as how you generally feel and think, using a booklet. These questionnaires are completely anonymous, so I will not be able to identify you from your questionnaires. I will give out the questionnaires and collect them at the end.

To take part in the project, you will need permission from your parent and/or guardian by returning your signed consent form to your home group teacher.

But remember, you don’t have to take part unless you want to. If you have any questions you should talk to your teacher or a parent. If they don’t know the answer to your question, they can contact me, or my supervisor, David Smith or the Research Ethics Office at RMIT University.

**What are the risks or disadvantages associated with participation?**

Due to the nature of the questions about bullying, there is a small potential to cause distress by asking you to reflect on what might have been an unpleasant experience. However, the questionnaires used in this study have been used in thousands of other studies, none of which have reported any incidents of significant emotional distress following its completion by other students.

If for any reason you want to stop doing the questions, you can simply stop doing them any time you like. If you don’t know an answer, or you don’t want to answer a question, that’s fine too.

The project will have nothing to do with your school report or your marks at school. You don’t even have to write your name on the booklet, so no one will be able to tell which answers are yours.

If after taking part in the project you have any concerns or unwelcome feelings and you want to talk to someone about them you can do this privately by contacting me, Geri Abdilla (phone: 9925 7376, email g.abdilla@student.rmit.net.au) or Dr. David Smith (phone: 9925 7523, email...
David Smith@rmit.edu.au. Alternatively, you can call Kids Help Line on 1800 55 1800, Australia’s only free, confidential and anonymous, 24-hour telephone and online counselling service specifically for young people aged between five and 18.

**What are the benefits associated with participation?**

Although there are no direct benefits by participating in this research, you are helping us to understand more about what factors make students more likely to bully others and how to best help students who are experiencing bullying. Once the study is finished, I will offer to complete a presentation to each school to illustrate the study’s results and findings.

**What will happen to the information I provide?**

The information you provide will be completely anonymous, which means that nobody will be able to identify the information you provide. A code will be given to your questionnaire only to identify your school and region.

The results of this research study may be presented at scientific or medical meetings or published in scientific journals, however your identity will not be disclosed and only group results would be presented.

After the project is over, I will lock all the booklets away safely in the Division of Psychology for 5 years. I have to do this because it is a University rule. After that my supervisor will destroy them.

**What are my rights as a participant?**

- You have
  - The right to withdraw your participation at any time, without prejudice.
  - The right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified, and provided that so doing does not increase your level of risk.
  - The right to have any questions answered at any time.

**Whom should I contact if I have any questions?**

- Miss Geri Abdilla on 9925 7376 or alternatively on email at g.abdilla@student.rmit.edu.au
- Dr. David Smith on 9925 7523 or alternatively on email at david.smith@rmit.edu.au

Yours sincerely

Ms. Geri Abdilla  
Principal Investigator  
Doctoral Candidate  
BBSc (Hons) (Psych)  
RMIT University
Dr. David Smith
Research Supervisor
BBSc (Hons), MPsych, PhD, MAPS
RMIT University
School of Health Sciences
Division of Psychology
Bundoora, 3083

Any complaints about your participation in this project may be directed to the Executive Officer, RMIT Human Research Ethics Committee, Research & Innovation, RMIT, GPO Box 2476V, Melbourne, 3001.
Details of the complaints procedure are available at: http://www.rmit.edu.au/rd/hrec_complaints
Appendix C: Plain Language statement & Consent form (Parent/Student)

INVITATION TO PARTICIPATE IN A RESEARCH PROJECT
PROJECT INFORMATION STATEMENT

Project Title:
Schoolyard bullying: An examination of individual differences in thoughts, feelings, and behaviours in adolescents and young adults

Investigators:
- Miss Geri Abdilla, (Clinical Psychology Doctoral student, RMIT University, g.abdilla@student.rmit.edu.au, 9925 7376)
- Dr David Smith (Project Supervisor: Senior Lecturer, Psychology, RMIT University, david.smith@rmit.edu.au, 9925-7523)

Dear parent,

You child is invited to participate in a research project being conducted by RMIT University. This information sheet describes the project in straightforward language, or 'plain English'. Please read this sheet carefully and be confident that you understand its contents before deciding whether you approve of your child to participate. If you have any questions about the project, please ask one of the investigators.

Who is involved in this research project? Why is it being conducted?

My name is Geri Abdilla and I am currently completing a Doctor of Clinical Psychology in the Division of Psychology at RMIT University, Bundoora. As part of the requirements of my course, I am conducting a study that investigates students’ opinions and/or experiences of bullying. This research project is being conducted under the supervision of Dr. David Smith, a Senior Lecturer/Psychologist in the Division of Psychology. This project has been approved by the RMIT Human Research Ethics Committee and the Department of Education.

Why have you been approached?

Your child’s school principal has given me permission to send you this letter to tell you about my project. This school was one of several schools across Metropolitan Melbourne randomly invited to participate in this important study. Once you have read the letter you can decide if you would like your child to take part.

What is the project about? What are the questions being addressed?

This research aims to gather information from students about their experiences and opinions of different types of bullying, including physical, verbal and cyber bullying and explore differences in bullying between males and females. In addition, this project aims to gather information about how your child thinks and feels about themselves and others and whether this is related to experiences of bullying. Even if you feel your child hasn’t experience bullying in any way, I
would still like to learn from your child about what they think has helped them avoid experiences of bullying. I am hoping to have at least 500 students participate in my research.

The questions being addressed include

- What are the attitudes of students towards physical, verbal and cyber forms of bullying?
- How do students who engaging in bullying (either physical/verbal/cyber) think and feel about themselves and others?
- How do students who experience bullying (either physical/verbal/cyber) think and feel about themselves and others?
- What characteristics help students to cope with experiences of bullying?
- What are the differences between males and females when it comes to bullying?

If I agree to participate, what will I be required to do?

As a participant in this study, your child will be asked to complete an anonymous questionnaire, which will take approximately 40-60 minutes to complete either during their class time, or during a non-teaching period such as when a teacher is away for the day. Disruption to class time will be minimised as much as possible. The questionnaire package includes measures of bullying victimisation, as well as questions about your child’s moods, worries, coping and thinking styles, and perceptions of self, friends, family, and teachers.

What are the risks or disadvantages associated with participation?
Participating in this project involves a small potential for your child to become upset by some of the questions, as some of the questions will ask your child to reflect on what might have been an unpleasant bullying experience. However, the questionnaires used in this study have been used in thousands of other studies, none of which have reported any incidents of significant emotional distress following its completion by other students.

If after taking part in the project you or your child have any concerns or unwelcome feelings and you want to talk to someone about them you can do this privately by contacting me, Geri Abdilla (phone: 9925 7376, email g.abdilla@student.rmit.net.au) or Dr. David Smith (phone: 9925 7523, email David.Smith@rmit.edu.au).

What are the benefits associated with participation?
Although there are no direct benefits by participating in this research, you are helping us to understand more about what factors make students more likely to bully others and how to best help students who are experiencing bullying or engaging in bullying behaviours. Once the study is finished, I will offer to complete a presentation to each school, where parents will be invited, to illustrate the study’s findings and implications.

What will happen to the information I provide?

The questionnaires are anonymous and entirely voluntary. To ensure confidentiality of your child’s information, we ask your child not to write their name, or any other comments that could identify him/her on the questionnaires if you allow him/her to participate – questionnaires will only be coded for school and region. Only my supervisor and I will see your child’s response.
booklets. Your child is free to withdraw from filling out or completing the questionnaire at any time.

Upon completion of the study, data will be secured in a locked cabinet in the Division of Psychology at RMIT for a minimum of FIVE years from the date of publication, and then it will be destroyed.

Alternatively, you can contact Dr. David Smith at the number provided below to obtain a written summary of findings.

The results of this research study may be presented at scientific or medical meetings or published in scientific journals, however in any case your child's identity will not be disclosed and only group data would be presented.

If you have any queries, please contact myself, Ms. Geri Abdilla on 9925 7376 or Supervisor/Lecturer Dr. David Smith, RMIT University, Faculty of Health Sciences – Division of Psychology on 9925 7523.

What are my child’s rights as a participant?
- Your child has
  - The right to withdraw his/her participation at any time, without prejudice.
  - The right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified, and provided that so doing does not increase your child’s level of risk
  - The right to have any questions answered at any time.

Whom should I contact if I have any questions?
- Miss Geri Abdilla on 9925 7376 or alternatively on email at g.abdilla@student.rmit.edu.au
- Dr. David Smith on 9925 7523 or alternatively on email at david.smith@rmit.edu.au

Yours sincerely

Ms. Geri Abdilla
Principal Investigator
Doctoral Candidate
BBSc (Hons) (Psych)
RMIT University
School of Health Sciences
Division of Psychology
Bundoora, 3083
Associate Professor David Smith  
Research Supervisor  
BBSc (Hons), MPsych, PhD, MAPS  
RMIT University  
School of Health Sciences  
Division of Psychology  
Bundoora, 3083

Any complaints about your participation in this project may be directed to the Executive Officer, RMIT Human Research Ethics Committee, Research & Innovation, RMIT, GPO Box 2476V, Melbourne, 3001.  
Details of the complaints procedure are available at: http://www.rmit.edu.au/rd/hrec_complaints
Statement of informed consent form for parents participating in research projects

Portfolio
School of
Name of participant:
Project Title:

Science, Technology and Engineering

Health Sciences

Schoolyard Bullying: An examination of individual differences in thoughts, feelings, and behaviours in adolescents and young adults

Name(s) of investigators: (1) Ms. Geri Abdilla Phone: 9925 7376
(2) Dr. David Smith Phone: 9925 7523

1. I have received a statement explaining the interview/questionnaire involved in this project.
2. I consent to participate in the above project, the particulars of which - including details of the interviews or questionnaires - have been explained to me.
3. I authorise the investigator or his or her assistant to interview my child or administer a questionnaire to my child.
4. I acknowledge that:
   (a) Having read Plain Language Statement, I agree to the general purpose, methods and demands of the study.
   (b) The project is for the purpose of research and/or teaching. It may not be of direct benefit to me.
   (c) The privacy of the personal information I provide will be safeguarded and only disclosed where I have consented to the disclosure or as required by law.
   (d) The security of the research data is assured during and after completion of the study. The data collected during the study may be published, and a report of the project outcomes will be provided to each participating school.

Participant’s Consent

Participant: ____________________________ Date: ________________
(Student Signature)

Witness: ______________________________ Date: ________________
(Signature)

Where participant is under 18 years of age:

I consent to the participation of _______________________________ in the above project.

Signature: (1) ___________________________ Date: ________________
(Signatures of parents or guardians)

Signature: (2) ___________________________ Date: ________________

Witness: ______________________________ Date: ________________
(Witness to signature)

Any complaints about your participation in this project may be directed to the Executive Officer, RMIT Human Research Ethics Committee, Research & Innovation, RMIT, GPO Box 2476V, Melbourne, 3001. The telephone number is (03) 9925 2251. Details of the complaints procedure are available from the above address.
Appendix D: Debriefing Letter

Dear Student,

Thank you for taking part in this project about bullying and sharing your thoughts and feelings about yourself as a student and about your school environment. We hope to use this information to make <School Name> an even better school! If after taking part in the project you have any concerns or unwelcome feelings and you want to talk to someone about them you can do this privately by contacting the following people

- Geri Abdilla (phone: 9925 7646, email g.abdilla@student.rmit.edu.au)
- Dr. David Smith (Geri’s supervisor) (phone: 9925 7523, email david.smith@rmit.edu.au)
- Kids Help Line on 1800 55 1800, Australia’s only free, confidential and anonymous, 24-hour telephone and online counselling service specifically for young people aged between five and 18.
- <Name of School’s Psychologist/Welfare Co-ordinator, and phone number>

Thanks again for participating!
Appendix E: Reactions to Cyber Victimisation

### Actions Taken in Response to Cyber Victimisation

<table>
<thead>
<tr>
<th>Type of Victimisation</th>
<th>Text Messaging ($n = 14$)</th>
<th>Email ($n = 13$)</th>
<th>Chatroom ($n = 12$)</th>
<th>Instant Messaging ($n = 37$)</th>
<th>Website ($n = 13$)</th>
<th>Multimedia (mobile phone) ($n = 9$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>N %</td>
<td>n %</td>
<td>N %</td>
<td>n %</td>
<td>N %</td>
<td>n %</td>
</tr>
<tr>
<td>Deleted</td>
<td>7</td>
<td>50.0</td>
<td>5</td>
<td>38.4</td>
<td>2</td>
<td>16.6</td>
</tr>
<tr>
<td>Told/Showed a friend</td>
<td>1</td>
<td>7.1</td>
<td>2</td>
<td>13.3</td>
<td>4</td>
<td>33.3</td>
</tr>
<tr>
<td>Told/showed a parent</td>
<td>1</td>
<td>7.1</td>
<td>1</td>
<td>7.7</td>
<td>3</td>
<td>25.0</td>
</tr>
<tr>
<td>Told/showed a teacher</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Left as is</td>
<td>3</td>
<td>21.4</td>
<td>5</td>
<td>38.4</td>
<td>2</td>
<td>16.6</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>14.2</td>
<td>1</td>
<td>7.7</td>
<td>2</td>
<td>16.6</td>
</tr>
<tr>
<td>No response</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7.7</td>
<td>2</td>
<td>16.6</td>
</tr>
</tbody>
</table>
### Appendix F: Table of Mean Scores of Psychosocial Variables

**Mean Scores on Measures of Psychosocial Variables Related to Bullies, Victims, Bully/Victims and Non-Involved Participants**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reynolds Adolescent Depression Scale</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>45.24 ± 9.25</td>
<td>46.88 ± 11.77</td>
<td>45.80 ± 10.09</td>
<td>52.78 ± 14.21</td>
<td>54.65 ± 10.20</td>
<td>53.42 ± 12.88</td>
</tr>
<tr>
<td>Female</td>
<td>46.88 ± 11.77</td>
<td>56.16 ± 12.74</td>
<td>52.28 ± 12.42</td>
<td>54.65 ± 10.20</td>
<td>54.65 ± 10.20</td>
<td>54.65 ± 10.20</td>
</tr>
<tr>
<td>Total</td>
<td>45.80 ± 10.09</td>
<td>56.16 ± 12.74</td>
<td>52.28 ± 12.42</td>
<td>54.65 ± 10.20</td>
<td>54.65 ± 10.20</td>
<td>54.65 ± 10.20</td>
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<tr>
<td><strong>Revised Children’s Manifest Anxiety Scale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>49.39 ± 9.10</td>
<td>52.44 ± 11.41</td>
<td>50.50 ± 9.88</td>
<td>60.37 ± 12.97</td>
<td>59.29 ± 8.22</td>
<td>59.37 ± 12.32</td>
</tr>
<tr>
<td>Female</td>
<td>52.44 ± 11.41</td>
<td>58.88 ± 11.01</td>
<td>58.11 ± 11.20</td>
<td>60.37 ± 12.97</td>
<td>59.29 ± 8.22</td>
<td>59.37 ± 12.32</td>
</tr>
<tr>
<td>Total</td>
<td>50.50 ± 9.88</td>
<td>58.88 ± 11.01</td>
<td>58.11 ± 11.20</td>
<td>60.37 ± 12.97</td>
<td>59.29 ± 8.22</td>
<td>59.37 ± 12.32</td>
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<tr>
<td><strong>Rosenberg Self-esteem Scale</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>21.52 ± 4.89</td>
<td>18.00 ± 5.92</td>
<td>20.15 ± 5.52</td>
<td>18.07 ± 17.46</td>
<td>17.46 ± 5.38</td>
<td>17.72 ± 15.64</td>
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<tr>
<td>Female</td>
<td>18.00 ± 5.92</td>
<td>16.92 ± 6.20</td>
<td>17.95 ± 5.87</td>
<td>18.07 ± 17.46</td>
<td>17.46 ± 5.38</td>
<td>17.72 ± 15.64</td>
</tr>
<tr>
<td>Total</td>
<td>21.52 ± 4.89</td>
<td>16.92 ± 6.20</td>
<td>17.95 ± 5.87</td>
<td>18.07 ± 17.46</td>
<td>17.46 ± 5.38</td>
<td>17.72 ± 15.64</td>
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<tr>
<td><strong>Adolescent Anger Rating Scale</strong></td>
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<tr>
<td>Male</td>
<td>57.00 ± 5.97</td>
<td>57.12 ± 5.93</td>
<td>58.78 ± 5.96</td>
<td>57.57 ± 6.14</td>
<td>65.79 ± 5.95</td>
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<tr>
<td>Female</td>
<td>62.13 ± 4.41</td>
<td>67.12 ± 5.93</td>
<td>68.95 ± 5.96</td>
<td>67.12 ± 5.93</td>
<td>67.12 ± 5.93</td>
<td>67.12 ± 5.93</td>
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<tr>
<td>Total</td>
<td>57.00 ± 5.97</td>
<td>67.12 ± 5.93</td>
<td>68.95 ± 5.96</td>
<td>67.12 ± 5.93</td>
<td>67.12 ± 5.93</td>
<td>67.12 ± 5.93</td>
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<tr>
<td><strong>Locus of Control Index</strong></td>
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<td></td>
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<td></td>
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<tr>
<td>Internal</td>
<td>8.41 ± 3.27</td>
<td>8.83 ± 3.56</td>
<td>8.25 ± 3.78</td>
<td>8.25 ± 3.78</td>
<td>8.25 ± 3.78</td>
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</tr>
<tr>
<td>Male</td>
<td>10.35 ± 5.28</td>
<td>8.84 ± 3.79</td>
<td>8.80 ± 2.46</td>
<td>8.80 ± 2.46</td>
<td>8.80 ± 2.46</td>
<td>8.80 ± 2.46</td>
</tr>
<tr>
<td>Female</td>
<td>9.13 ± 4.17</td>
<td>8.84 ± 4.77</td>
<td>8.44 ± 3.35</td>
<td>8.44 ± 3.35</td>
<td>8.44 ± 3.35</td>
<td>8.44 ± 3.35</td>
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<tr>
<td>Total</td>
<td>9.13 ± 4.17</td>
<td>8.84 ± 4.77</td>
<td>8.44 ± 3.35</td>
<td>8.44 ± 3.35</td>
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</table>

(Table continues)
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<thead>
<tr>
<th>Locus of Control Index</th>
<th>Bully</th>
<th>Victim</th>
<th>Bully/Victim</th>
<th>Non-Involved</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$n$</td>
<td>$M$</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
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<td>3.34</td>
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<td>16.65</td>
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<td>6.66</td>
<td>14</td>
<td>15.83</td>
</tr>
<tr>
<td>Total</td>
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<td>4.96</td>
<td>38</td>
<td>16.26</td>
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<td>Avoidance</td>
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<td>15.03</td>
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<tr>
<td>Female</td>
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<td>6.89</td>
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<td>5.14</td>
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<td>11.52</td>
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