The Relationship Between Self-Serving Cognitive

Distortions and Bullying Behaviours

Among Elementary School Children

Kristen Bombay, B.A./B.Ed.

Department of Graduate and Undergraduate

Studies in Education

Submitted in partial fulfillment of

the requirements for the degree of

Master of Education

Faculty of Education, Brock University

St. Catharines, Ontario

Abstract

The purpose of the study was to examine the relationship between self-serving

cognitive distortions and involvement in bullying behaviours. While relationships

were explored for both bullies and victims, the bully represented the main focus of this

research. The participants of this study were 206 elementary school children in grades

5, 6, 7, and 8 from a school board in South Western Ontario. Participants completed a

2- part self-report questionnaire within a 1-week time period. Part I aimed to measure

self-serving cognitive distortions, while Part II was designed to assess self reports of

bullying behaviours. Analyses revealed that a significant direct relationship existed

between children's self-serving cognitive distortions and bullying others. More

specifically, children's self-serving cognitive distortions were moderately correlated

with bullying others ($r = .50$, $p < 0.01$). This finding was consistent for both male and

female participants. In addition, significant moderate correlations also existed

between each of the 9 subscales of self-serving cognitive distortions and bullying

others. In regard to the relationship between children's self-serving cognitive

distortions and victimization, a low significant direct relationship was found ($r = .22$

$p < 0.01$). This finding was consistent for both male and female participants. The

results of this study are discussed in terms of their theoretical, as well as applied

implications.

Table of Contents

List of Tables

List of Tables

List of Figures

CHAPTER ONE: THE PROBLEM

Introduction

This study addressed the relations between children's social cognition and involvement in bullying behaviours. Social cognition can be defined as one's thoughts, perceptions, and beliefs regarding social situations (Ingram & Kendall, 1986, as cited in Lochman & Dodge, 1994). This thesis specifically focused on one aspect of social cognition – self-serving cognitive distortion and its relationship to bullying behaviours. Self-serving cognitive distortion refers to inaccurate and/or rationalizing thoughts and beliefs about one's own or others' social behaviour. These distortions "help to protect the self from blame or a negative self-concept and thereby disinhibit aggression or other antisocial behaviour" (Barriga, Landau, Stinson, Liau, & Gibbs, 2000, p. 36). Bullying, which is a form of peer aggression, is defined as the repeated and intentional abuse of physical and/or psychological power (Marini, Spear, & Bombay, 1999). Bullying can create a hostile environment of intimidation, severe anxiety, and chronic fear in victims (Marini, 1996).

Until recently, research on the topic of bullying among school children was for the most part descriptive in nature; that is, the focus has been on trying to understand the prevalence, characteristics, and consequences of this form of peer aggression. While this approach has resulted in valuable research, it also has limitations (Craig, Peters, & Konarski, 1998; Sutton, Smith, & Swettenham, 1999a). If progress is to be made in bullying research, then there is a need to investigate in greater detail some of the underlying mechanisms that are involved in the development and maintenance of bullying behaviours.

An understanding of some of the possible contributing cognitive factors for bullying behaviours such as self-serving cognitive distortions, is particularly important for the reduction of bullying through the development of effective prevention (Slee, 1993; Sutton et al., 1999a). Pepler, Craig, and O'Connell (1999) believe that cognition is one of the most significant influential factors in the development and maintenance of bullying. According to Pepler et al. (1999), personal characteristics of the child, as well as early experiences can "converge to establish a behavioural or cognitive tendency to become involved as the aggressor or victim within a bully-victim relationship" (p. 445). Although their dynamic systems approach to bullying emphasizes that bullying among school children occurs within a multilevel social context, what is also evident is that an understanding of cognitions at the individual level represents an important step towards the reduction and prevention of bully/victim problems within schools.

Background of the Problem

The phenomenon of bullying among children has long been in existence. For years, bullying was largely viewed to be a "normal" part of childhood and one which affected only a small number of children in minimal ways. Recent research has dispelled such common myths and assumptions, and in doing so, has revealed that bullying is a problem with both educational and societal implications (Craig et al., 1998; Olweus, 1993; Smith & Sharp, 1994).

Bullying is a universal problem that has been documented in many countries throughout the world such as Australia, Canada, England, Japan, and Scandinavian countries (Atlas & Pepler, 1998; Charach, Pepler, & Zeigler, 1995; Olweus, 1993, 1999a; Smith & Sharp, 1994). Researchers within many of these countries have found similar bullying trends and high rates of bullying behaviours in schools. Both the universal nature and high prevalence of bullying, indicate that it is a serious social and educational problem, which warrants thorough and immediate research.

Children who are victimized by bullies typically experience feelings of anxiety, humiliation, and chronic fear (Marini, 1996). Furthermore, it must be recognized that it is not only children directly involved in bullying incidents who are negatively impacted by its occurrence; those children who are indirectly exposed to such behaviours can also be negatively influenced (Charach et al., 1995). In addition, bullying can alter the overall school climate, thus, interfering with children's learning and development (Griffiths, 1995). Clearly, bullying needs to be considered as a problem which not only affects individual children but also one which affects the school population as a whole, and ultimately the school learning environment.

With an increased understanding of the nature and characteristics of bullying behaviours and the recognition that bullying can have negative and sometimes long-lasting consequences, researchers have developed anti-bullying programs with the aim of reducing such behaviours within schools. Although the anti-bullying programs designed by Olweus (1993), Pepler, Craig, Zeigler, & Charach (1994), and Smith and Sharp (1994) have made important contributions to the reduction of bullying

behaviours, more needs to be done to develop programs with effective theoretical frameworks (Pepler et al., 1999; Sutton et al., 1999a). For example, many of the procedures, policies, and activities that are evident in the aforementioned intervention programs tend to be rather reactive in nature. For instance, such programs have advocated increasing playground supervision or developing class rules against bullying. Clearly, the implementation of such measures is important for the reduction of bullying behaviours. Yet, it must also be acknowledged that these measures may not address the true underlying mechanisms associated with such behaviours. Thus, research which explores some of the possible underlying mechanisms associated with bullying behaviours is likely to have a significant impact on the development of future anti-bullying programs (Rigby, 1997).

Statement of the Problem Situation

As mentioned previously, the main aim of preliminary research into bullying was to develop an understanding of the prevalence, characteristics, and consequences of bullying. Although an understanding of such issues is important, what is currently needed is research which concentrates on the possible underlying mechanisms involved in the development and maintenance of bullying behaviours (Craig, Peters, & Konarski, 1998; Sutton, Smith, & Swettenham, 1999a). Therefore, the problem underlying this study is that there is a need to understand the role of social cognition in bullying behaviours among children.

Purpose of the Study

While there is both theoretical and empirical evidence to support the centrality of cognition, and more specifically, social cognition, as a mediating factor in the development and maintenance of aggression (Baron & Richardson, 1994; Coie & Dodge, 1998; Dodge & Crick, 1990), there is need for further study with respect to the specifics of how social cognition is influential in fostering or inhibiting aggression, as well as how social cognition is related to specific forms of childhood aggression. Therefore, the purpose of this study was to examine the relationship between children's self-serving cognitive distortions and bullying behaviours. An understanding of this relationship is critical, if anti-bullying programs are to meet the cognitive needs of the children involved in bully/victim problems.

Questions to be Answered

The general question underlying this empirical investigation was as follows:

What is the relationship between children's self-serving cognitive distortions and involvement in bullying behaviours (as bully or victim)?

Building on previous research of self-serving cognitive distortions and aggressive behaviours, the main focus of this study was to examine the relationship between children's self-serving cognitive distortions and their involvement in bullying. In other words, the focus of this thesis was mainly on the aggressor in the bully-victim

problem, rather than the victim. The specific question underlying this thesis was as follows:

Q1. What is the relationship between children's self-serving cognitive distortions and bullying others?

Despite this focus on the aggressor in bully/victim problems, the following question was also of interest:

Q2. What is the relationship between children's self-serving cognitive distortions and victimization?

It is important to note that above questions were also examined in terms of gender and age differences.

In addition to examining the relationship between children's self-serving cognitive distortions and involvement in bullying behaviours, other questions were also of interest regarding the prevalence of bullying behaviours. Furthermore, there was also interest in identifying certain characteristics of bullying behaviours, as well as learning about some of the characteristics of self-serving cognitive distortions. While one of the key goals underlying this research was to move away from a descriptive focus, such information was still deemed important, and thus, was briefly analyzed and reported.

Definition of Terms

Each of the key terms related to this study is defined and explained throughout the paper. Explanation of the terms throughout the document was viewed as a

logical and rhetorical approach, as it provides the reader with immediate clarification of the meaning of the terms being relied upon in this study. In addition, the key terms have been defined in the list below for a quick referral.

Aggression – "any form of behaviour directed toward the goal of harming or injuring another living being who is motivated to avoid such treatments"

(Baron & Richardson, 1994, p. 7).

Bullying – a form of aggression, defined as the repeated and intentional abuse of physical and/or psychological power

(Marini, Spear, & Bombay, 1999).

In this study, "bullying" will be used interchangeably with "bullying behaviours" and "bully-victim problems."

> **Covert – physical bullying** - indirect and/or secretive physical attacks
>
> **Covert – psychological bullying** - indirect and/or secretive verbal, social, or emotional attacks
>
> **Overt – physical bullying** - direct and open physical attacks
>
> **Overt – psychological bullying** - direct and open verbal, social, or emotional attacks
>
> (Marini, Spear, & Bombay, 1999).

Social cognition – refers to one's thoughts, perceptions, and beliefs regarding social situations and is composed of numerous types of <u>social information processing variables</u> and latent <u>cognitive schemas</u> which work in conjunction to produce behaviour (Ingram & Kendall, 1986, as cited in Lochman & Dodge, 1994).

> **Social information-processing variables** – "indicate how a child perceives and responds to social situations"
>
> (Lochman & Dodge, 1994, p. 367).
>
> **Cognitive schema** –a belief system that is the product of personal experiences, comprised of beliefs concerning personal competence, self-worth, and goal achievement
>
> (Lochman & Dodge, 1994).

Cognitive distortions - "inaccurate or rationalizing attitudes, thoughts, or beliefs concerning one's own or others' social behaviour" (Liau, Barriga, & Gibbs, 1998, p. 335), which may be evident in both cognitive schema and particular social-information processing steps

Self-serving cognitive distortions – distortions which "help to protect the self from blame or a negative self-concept and thereby disinhibit aggression or other anti-social behaviour"

(Barriga et al., 2000, p. 36).

> **Self-centred** – thinking errors arising from egocentric bias in which resistance to one's wants or wishes is viewed as extremely unfair

Assuming the worst – thinking errors which involve the attribution of hostile

intent to others

Blaming others – thinking errors in which there is misattribution of

blame and fault to others

Minimizing/Mislabeling –thinking errors in which antisocial

or aggressive behaviour is perceived as acceptable

(Gibbs & Potter, 1992).

Rationale

Though progress has been made in both understanding and reducing bullying

behaviours within schools, the empirical investigation of bullying among school

children is relatively recent. The topic has been studied most extensively in

Scandinavian countries (Olweus, 1993) and the United Kingdom (Boulton &

Underwood, 1992; Smith & Sharp, 1994). In comparison, a relatively limited amount

of empirical research has been conducted in North American schools and in particular

Canadian schools. According to Charach et al. (1995), as well as Craig et al. (1998),

bullying has only recently become the object of systematic research in Canada. Such a

statement raises concerns, considering the practical reality of bullying in Canada.

Research from the National Longitudinal Study of Children and Youth (NLSCY)

showed that approximately 20% of Canadian school children are involved in bullying,

either as a bully or a victim (Craig et al., 1998, p. iii).

Research conducted in other countries is a valuable guide for both Canadian researchers and educators, as it provides information regarding the central issues and variables surrounding the problem. Despite the significance of such research, it must also be recognized that societal and cultural differences may exist between these countries and Canada, making the generalization of such results difficult (Olweus 1987, as cited in Boulton & Underwood, 1992). Thus, there is great need for Canadian researchers to conduct more empirical investigations of their own in order to understand bullying in schools from a unique Canadian perspective.

In addition to the fact that there has been a limited amount of Canadian research conducted on bullying among school children, the investigation of social cognitive processes and how they influence bullying behaviours has received very little attention. While previous research has found that certain social cognitive patterns can be a predictor of general childhood aggression, the role that social cognition plays in the development and maintenance of bullying behaviours is just beginning to be defined (Rigby, 1997; Sutton, Smith, & Swettenham, 1999a). Thus, the present preliminary study aimed to fill a gap in the existing social cognitive and bullying literature, as well as provide possible practical implications.

Importance of the Study

Investigating children's self-serving cognitive distortions and how they relate to bullying behaviours is significant as there is likely to be both theoretical and practical implications of this research.

First, the cognitive system is believed to be critical for both the acquisition and regulation of social behaviours (Huesmann, 1998). Although there is a substantial amount of literature which supports the notion that there are a multitude of interdependent factors (individual and situational/environmental) which play a role in the development and maintenance of aggressive behaviours, cognition, and more specifically, social cognition, has recently emerged as one of the most significant factors due to its mediating effect on other variables (Bombay & Marini, 2001; Boulton & Smith, 1994; Huesmann, 1998; Marini, Spear, & Bombay, 1999; Olweus, 1993, Pepler et al., 1994).

Studies such as this one, which examine the mechanisms involved in the relations between a specific component of social cognition and a specific type of childhood aggression, are important due to the central role that social cognition has consistently and continuously been found to play in the development and maintenance of aggressive behaviours (Coie & Dodge, 1998; Dodge, Bates, & Pettit, 1990; Dodge & Crick, 1990; Lochman & Dodge, 1994). The more that is learned about how social cognition mediates aggression, the greater the likelihood that researchers will be able to develop a more comprehensive understanding of aggression and hence efforts can be made to manage and prevent it.

Second, this study has the potential to impact research which examines how social cognitive processes contribute to bullying behaviours. While previous studies have been conducted to investigate the social-cognitive processes of aggressive children (Crick & Dodge, 1996; Dodge & Crick, 1990; Dodge, Harnish, Lochman,

Bates, & Pettit, 1997), this study is significant as it focuses on the social-cognitive processes of children who specifically engage in bullying behaviours. Furthermore, the present study has isolated one component of social cognition – self-serving cognitive distortion, and sets out to examine its specific relationship to bullying behaviours. According to Rigby (1997) and Sutton et al. (1999a), research investigating the role of social cognition in bullying behaviours is still very much in its preliminary stages. Even though prior studies have been extremely valuable for revealing certain patterns and trends in aggressive children's social cognition, they are limited as to their generalizability to those children identified as bullies. Research needs to be conducted specifically with children identified as bullies in order to learn more about their particular social-cognitive processes.

From a practical standpoint, this study is valuable, as the results could hold important implications for educators and curriculum planners. Even though numerous variables have been found to play a role in the development and maintenance of aggressive behaviours, teachers are limited as to their influence over many of these factors. For instance, it is very difficult for schools and educators to control or even monitor variables which occur outside of the school such as children's exposure to media aggression and violence or aggression in familial situations. Fortunately, within the school system, educators can a make a crucial difference in their intervention with the variable that is emerging as one of the most significant – social cognition (Coie & Dodge, 1998). It is hoped that this study will reveal certain patterns and trends with respect to children's self-serving cognitive distortions and bullying behaviours.

Thus, the information that is obtained from this study is likely to be valuable for practitioners as it may assist in the development of anti-bullying programs. More specifically, it is hoped that the results of this study will reveal not only if, but how bullies cognitively distort information. The more that is understood about the social-cognitive processes of bullies, the more likely it will be that educators and curriculum planners can create anti-bullying programs which will effectively meet the cognitive needs of those involved. Such programs would also be beneficial as they may help prevent or reduce distortions in peer groups. The cognitions and behaviours of children who are not directly involved in bullying can also greatly influence the maintenance and continuation of bullying (Pepler et al., 1999).

The overall aim of such programs would be to prevent or reduce cognitions which support bullying behaviours and ultimately help all children develop cognitive processes which support and facilitate competent and positive social interaction. Since as early as 1994, The Safe School Task Force in Ontario has stated that all children, their families, school support staff, and the community at large have the right to have schools which are safe and free of violence. Studies such as this one, have the potential to make a substantial contribution toward the achievement of this goal.

Outline of the Remainder of the Document

The remainder of this thesis examines and reports on theoretical and empirical literature regarding social-cognitive processes and aggressive behaviours. Chapter 2 is

a review of literature on general aggression, bullying, and social cognitive processes. Chapter 3 provides detailed information on the research methodology utilized for this study. The research design, participants, instruments, and procedures used to gather data are reported. Chapter 4 describes the results of the study. Chapter 5 contains a discussion of the results by providing a summary of the findings, conclusions, and implications for practice, theory, and future research.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

Organization of the Present Chapter

This chapter reviews literature that is both theoretical and empirical in nature.

There are four major sections in the literature review. The beginning of the review

provides a general summary of aggression research in order to put the study of

bullying behaviours into a larger context. The next section specifically examines what

is currently known about bullying behaviours. The third section focuses on social-

cognition and its relations to bullying behaviours. The final component contains a

discussion on research that has specifically targeted one aspect of social cognition –

self-serving cognitive distortion, and its relation to antisocial behaviours.

Aggression

Conceptualization

Despite numerous attempts, a common definition of aggression remains

elusive (Baron & Richardson, 1994; Coie & Dodge, 1998; Renfrew, 1997).

Definitions have been criticized for either the inclusion or exclusion of certain

variables, as well as their underlying focus. For instance, discussions have arisen

concerning whether variables such as those of "intent" and "form of injury" should be

explicitly addressed within the definition. Furthermore, there is some disagreement on

whether the definition should focus on behaviour patterns, antecedent conditions,

outcomes, or the social judgment of aggressive behaviour (Coie & Dodge, 1998).

Though such issues continue to be debated, support has been mounting for a

definition similar to the following: "aggression is any form of behavior directed

toward the goal of harming or injuring another living being who is motivated to avoid such treatments" (Baron & Richardson, 1994, p. 7; Geen, 1998). Thus, for the purpose of this thesis, aggression is conceptualized according to the aforementioned definition.

In order to better understand why definitions similar to the one constructed by Baron and Richardson (1994) are being supported, certain key features of this definition warrant attention. First, and foremost, the definition classifies aggression as a behaviour.

A second key feature of the definition is the reference to aggression as a directed behaviour. By referring to aggression as a directed behaviour, the intent and goal to cause harm is highlighted. Intent plays a pivotal role in aggressive behaviour. Intent is a necessary criterion when considering the term aggression because without it, a host of accidental behaviours could be hastily classified as aggressive acts (Baron & Richardson, 1994; Renfrew, 1997). While it could be argued that intent, as well as other features of this definition require a subjective analysis, more objective observational measurements could be used for measurement. This can be accomplished through observation of the events both preceding and following the aggressive behaviour (Baron & Richardson, 1994; Renfrew, 1997).

The third key feature of this definition is that aggression is said to involve harm or injury to the victim. This aspect of the definition is very significant because it indicates that the victim of aggressive behaviour experiences negative consequences as a result of the act. Furthermore, since the definition does not explicitly state the

form of injury inflicted upon the victim, injury may be physical and/or psychological in nature, as is the case with bullying behaviours (Baron & Richardson, 1994).

The fourth key feature of this definition is the suggestion that aggression can harm or injure only living beings. This broad terminology takes into account all living things and yet, requires that the aggressive act result in some form of aversive consequence (physical and/or psychological) for the victim, not just an inanimate object (Baron & Richardson, 1994).

It is important to emphasize that while according to this definition, there are certain specific characteristics associated with aggression, the term aggression still refers to a wide variety of acts. Aggressive behaviour can be manifested in a number of different ways, which can also vary in severity (Loeber & Hay, 1997).

Types of Aggression

Researchers from different theoretical and empirical approaches (Bandura, 1973; Berkowitz, 1993; Crick & Dodge, 1996; Price & Dodge, 1989) have identified the existence of two general forms of aggression. While various labels have been proposed for these two forms of aggression, the notion that the two forms of aggression differ in their structure and function remains consistent (Crick & Dodge, 1996; Dodge et al., 1997). For the purpose of this review, the two forms of aggression will be referred to as reactive (hostile) aggression and proactive (instrumental) aggression.

Reactive (hostile) aggression is theoretically rooted in the frustration-aggression hypothesis (Berkowitz, 1993; Dollard, Doob, Miller, Mowrer, & Sears, 1939) which postulated that "aggression is a hostile, angry reaction to perceived frustration or threat" (Dodge & Coie, 1987, p. 1147). This frustration-aggression explanation greatly emphasizes the role of the instigators or antecedents which serve to "push" the individual to retaliate or respond in an aggressive manner. Instigators can include goal blocking, heightened anger, threat, or frustrated expectations (Dodge & Coie, 1987). The function of this reactive form of aggression is to relieve a perceived threat or frustration.

The second form of aggression, known as proactive (instrumental) aggression, is theoretically supported by Bandura's (1973) social learning theory. According to this theory, "aggression is an acquired instrumental behaviour that is controlled by reinforcements" (Dodge & Coie, 1987, p. 1147). Rather than placing emphasis on responses to antecedent conditions, this form of aggression focuses on the anticipated outcomes of aggression. It is assumed that both modeling processes and feedback such as reinforcement or punishment help to shape proactive aggressive behaviours (Coie & Dodge, 1998). Thus, it is the anticipated incentive or outcome which serves to "pull" the deliberate behaviour. It is the achievement of an internally constructed goal which is the main function of this form of aggression (Dodge & Coie, 1987).

Based on the descriptions of the two types of aggression, bullying can be classified as a form of aggression which is predominately proactive in nature (Boulton & Smith, 1994; Dodge & Coie, 1987). According to Coie, Dodge, Terry, & Wright

(1991), the anticipated outcome of bullying behaviour is to gain interpersonal dominance of another individual or group of individuals. It is important to note, that while acts of bullying may include efforts to obtain or destroy object possessions, the main underlying goal of the behaviour is not to obtain the object itself, but rather to obtain interpersonal dominance over another person by way of the act (Coie et al., 1991).

<u>Current Themes in Aggression Research</u>

An analysis of recent aggression research reveals the emergence of certain key themes which made a significant contribution towards the understanding of general aggressive behaviour. In addition, they have provided a theoretical and empirical foundation for research which specifically examines bullying.

The first theme evident is that there is an increased focus on understanding the development of aggressive individuals. More specifically, focus is on the developmental course and determinants of individual differences in aggression (Baron & Richardson, 1994; Coie & Dodge, 1998). This interest in individual differences in aggression, represents an important shift in aggression research. Prior to the 1980s, the majority of research explored the existence and characteristics of a species-wide pattern of aggressive behaviour. For instance, investigators were interested in learning about the species-wide, age-related changes in aggressive behaviour (Coie & Dodge, 1998). As a result of the knowledge gained through such preliminary studies, investigators are now able to concentrate on the individual differences in aggression.

Another significant theme evident in aggression research, guided by this underlying shift in research focus, is the emphasis on understanding the stability of individual differences in aggression (Baron & Richardson, 1994; Coie & Dodge, 1998). Longitudinal studies such as those conducted by Farrington (1994) and Stattin and Magnusson (1989) have explored the stability of aggression among individuals across time. In these studies, measures of aggressive behaviour were repeatedly taken over extended periods of time, in order to determine if relationships existed among the measurements of aggression. While the various studies relied upon different time intervals for aggression measurement, their findings indicate that across both time and situation, aggression can be considered a stable characteristic for individuals. In other words, early aggression is a general predictor of aggression and/or violence in later life (Coie & Dodge, 1998; Loeber & Hay, 1997). This finding has been consistent for both males and females (Coie & Dodge, 1998).

While there is general consensus that early aggression is a predictor of later aggression and/or violence, it is essential to mention a few limitations of this finding. In particular, Loeber and Hay (1997) point out that aggressive behaviour is known to desist over time for a large proportion of individuals. This pattern is similar to the research on physical aggression reported by Tremblay (2000). Furthermore, while an awareness that a significant correlation exists between aggression early in life and later in life is important, a correlation in itself does not reveal changes in the severity level of aggression with age (Loeber & Hay, 1997).

According to Loeber, Keenan, and Zhang (1997), severity of aggression typically follows an age-related trend in which the level of aggression often becomes increasingly severe with age (as cited in Loeber & Hay, 1997). Individuals tend to first show aggression in the form of minor aggression, followed by physical fighting, and then violence (Tremblay, 2000). Loeber et al.'s (1997) research (as cited in Loeber & Hay, 1997) on the developmental ordering of aggression, coupled with research which indicates that aggression can be a general predictor for later aggression and/or violence, clearly points to the need for early intervention programs which aim to reduce aggressive behaviour among children. According to Tremblay (2000), "the preschool years are the best window of opportunity to prevent the development of cases of chronic physical aggression" (p. 19).

An additional prevailing theme in aggression research is the notion that aggressive behaviour develops as a result of a process which is very complex and multifaceted. It is widely known that a variety of interdependent factors are influential in the development of aggressive individuals (Coie & Dodge, 1998; Loeber & Hay, 1997; Pepler et al., 1999; Renfrew, 1997). Such research has emerged as a result of the increased interest in understanding the individual differences involved in the development of aggression (Coie & Dodge, 1998).

Individual characteristics including difficult temperament, hyperactivity, and imbalance of hormones (Coie & Dodge, 1998), as well as social-cognitive deficiencies and distortions (Gibbs, Potter, Barriga, & Liau, 1996), have been implicated in the development of aggressive behaviour. In addition,

situational/environmental factors are also believed to play a role in aggressive development. Poverty, neighbourhood violence, peer modeling, reinforcement of aggression, media violence, racial discrimination, subcultural modeling of aggression, family stressors, poor parent-child relationship, physical abuse, and hostile and inconsistent parenting are just some of the factors which have been associated with aggressive behaviour (Baron & Richardson, 1994; Coie & Dodge, 1998; Loeber & Hay, 1997).

While social-cognitive processes are classified as individual characteristics in the development and maintenance of aggression, their role warrants additional focus. This is largely due to the mediating effects social-cognitive processes have on such experiences and factors (Coie & Dodge, 1998; Huesmann, 1998; Loeber & Hay, 1997; Rigby, 1997). According to Coie & Dodge (1998), it is the "individual differences in early ecological and family experiences which have been found to be predictive of later cognitive and emotional processes in children..." (p. 780). These cognitive and emotional processes are, in turn, believed to influence future social behaviour. Social cognition should not be regarded as a cause of aggression, but rather as a mediating process which connects predisposing personal and environmental factors to actual social behaviours in a predictable manner (Huesmann, 1998). In other words, the cognitions that children learn in order to adapt to their environment greatly shape their future social behaviours.

Social Cognition and Aggression

As described previously, social cognition refers to one's thoughts regarding social situations. It is composed of various types of information-processing steps and latent cognitive schemata. It is believed that these social-cognitive processes work in conjunction to produce behaviour (Ingram & Kendall, 1986, as cited in Lochman & Dodge, 1994). A fundamental principle of general social-cognitive theory, is the notion that aggression is not inevitable, rather it is dependent upon information-processing patterns and general schemata (Coie & Dodge, 1998; Dodge & Crick, 1990).

Social information processing is believed to play a central role in behaviour, as it refers to both an individual's perception and actual response to a social situation (Coie & Dodge, 1998). Social information processing is composed of variables such as encoding of social cues, interpretations of social cues, response search, response evaluation, and enactment (Coie & Dodge, 1998; Dodge & Crick, 1990).

The other main component, cognitive schema, refers to a belief system which is the product of one's experiences (Lochman & Dodge, 1994). It is hypothesized to guide the overall processing of social information (Coie & Dodge, 1998). A schema is comprised of knowledge structures concerning such issues as personal competence, self-worth, and goal achievement. While cognitive schema is thought to be an evolving structure based on experiences, it generally remains consistent across situations, as well as time (Lochman & Dodge, 1994).

Social information processing theory, a branch of general social-cognitive theory, has largely guided the research on aggressive children's social cognition (Coie & Dodge, 1998). The thesis of this theory is that deficits and/or distortions in social cognition are believed to be important factors in accounting for aggression. The social information processing model designed by Dodge, Pettit, McClaskey, and Brown (1986) has been quite influential in testing this thesis of social information processing. While other approaches have been used (see Crick & Werner, 1998), this model has largely dominated the literature (Coie & Dodge, 1998). This model postulates that behavioural response to social/environmental stimuli is a function of five social cognitive steps, namely, encoding of social cues, interpretations of social cues, response search, response evaluation, and enactment (Coie & Dodge, 1998; Dodge & Crick, 1990). In accordance with the thesis of social information-processing theory, this model states that competent behaviour results from skillful processing, while deficient and/or distorted processing at any of the steps may lead to aggressive behaviour (Coie & Dodge, 1998). Cognitive deficiencies occur when an individual has an insufficient amount of certain types of cognitive activity. Cognitive distortions, which are a form of misperception, can be defined as "inaccurate or rationalizing attitudes, thoughts, or beliefs concerning one's own or others' social behaviour" (Beck, 1976, as cited in Gibbs, Potter, Barriga, & Liau, 1996, p. 289). While cognitive distortions and cognitive deficiencies are represented as two different processes, their role in facilitating antisocial and aggressive behaviour is believed to be interdependent.

In assessing the social cognition of aggressive children, researchers (Crick & Dodge, 1996; Crick & Werner, 1998; Dodge et al., 1997; Lochman & Dodge, 1994) have typically relied on hypothetical-situation instruments in which children are exposed to stories about conflict either through print or video media. Following the stories, children are asked a series of questions designed to measure their social information-processing at each of the five steps in Dodge et al.'s (1986) model.

From a general standpoint, studies have consistently supported the thesis of the social information processing theory. More specifically, they have illustrated that aggressive children possess a variety of social-cognitive processes that are deficient and/or distorted in some manner. This is turn, is believed to increase the probability that they will act in aggressive ways (Coie & Dodge, 1998; Crick & Dodge, 1994, 1996; Crick & Werner, 1998; Dodge et al., 1990; Egan, Monson, & Perry, 1998; Lochman & Dodge, 1994). Social cognition processes are believed to be so significant because of their mediating role in children's aggression (Coie & Dodge, 1998; Huesmann, 1998; Loeber & Hay, 1997).

Bullying

Historical Perspective

While the phenomenon of bullying has a long history, the systematic research of bullying among school children is relatively recent. Bullying, a form of peer aggression, refers to the repeated and intentional abuse of physical and/or

psychological power (Marini, Spear, & Bombay 1999). Victims of bullying typically become intimidated at school and experience severe anxiety and chronic fear (Marini, 1996). Much of the current interest in understanding bullying can be credited to the self-report research conducted in schools in the 1970s and early 1980s by Olweus in Scandinavia (Charach et al., 1995; O'Connell et al., 1997; Smith & Levan, 1995). While each country (or region) has its own developmental history of bullying research, Olweus' research represents the focal point from which these studies have emerged (Charach et al., 1995). Olweus's work provided descriptions of the basic nature and characteristics of bullying, and its prevalence and occurrence in Scandinavian primary and secondary schools (Smith & Sharp, 1994)

It was not until the mid 1980s and early 1990s that bullying among school children became a focus among educators and researchers in other countries (Olweus, 1994). It was at this time (mid to late 1980s) that the information and results from Olweus's initial research endeavours became available to researchers and educators in other parts of the world. Since then, countries such as the United Kingdom (Boulton & Underwood, 1992; Smith & Sharp, 1994) as well as Australia (Rigby & Slee, 1992; 1993), have devoted much empirical attention to understanding bullying among children. More recently, research has been conducted in North American schools (Charach et al., 1995; Craig et al., 1998; O'Connell et al., 1997; Pepler, Craig, & Roberts, 1998).

The most common approach for the study of bullying among school children has been quantitative, nonexperimental research. This has remained consistent from

the 1970s to today. In fact, according to Pellegrini (1998), the majority of research findings to date have been based on self-report methodology using questionnaires. Slee (1993) points out that peer group nominations and teacher estimates have also been utilized, although still not to the extent of self-reports. In Canada, the work of Pepler and her colleagues has provided excellent methodological and conceptual advances in the study of bullying. These researchers have recently begun to lead the way in assessing bullying behaviour among children through naturalistic observational techniques (Atlas & Pepler, 1998; Craig, Pepler, & Atlas, 2000; Pepler & Craig; 1995; Pepler et al., 1998). These researchers believe this methodological approach allows for a more thorough assessment of the dynamics and situational variables which may influence the occurrence of bullying at school.

Prevalence

The issue of bullying has recently become a growing concern among educators and researchers throughout the world. Bullying is an international problem, as evidenced by its documentation in schools in numerous countries. Research has been conducted at a national level in countries such as: Australia (Rigby, 1997), Canada (Craig et al., 1998; Pepler et al., 1998), England (Whitney & Smith, 1993), Japan (Morita, Soeda, Soeda, & Taki, 1999), and Scandivania (Olweus, 1993). This national research has revealed comparable rates of bullying among children. These findings indicate the pervasiveness and seriousness of the problem at both a social and educational level (Olweus, 1999a).

A recent Canadian national study, conducted by Craig et al. (1998), indicated that a significant proportion of children are involved in bullying problems at school. Relying on parent and child ratings of bullying and victimization, Craig et al. (1998) found that approximately 20% of children between the ages of 4 and 11 were involved in bullying behaviours. More specifically, 14% of the children were identified as bullies, while 5% were identified as victims of bullying.

In spite of the conceptual and methodological variations which may exist within bullying research conducted throughout the world, it can be generally concluded that approximately 20% of school children are involved in bullying, as either victims or bullies (Marini, Spear, & Bombay, 1999). Clearly, studies have indicated that bullying is not an infrequent and isolated event experienced only by few children but rather a relatively common phenomenon within schools.

<u>Characteristics</u>

Bullying, a particular form of peer aggression, can be considered unique from other forms of peer aggression due to the existence of three main characteristics. Bullying involves a power differential between victim and bully, repeated use of aggression against the victim, and intent on the part of the bully to cause harm to the victim (Olweus, 1993, 1999b; Smith & Sharp, 1994).

First, bullying incidents involve an imbalance of strength between the victim and the bully. The asymmetrical power relationship may be physical and/or psychological in nature (Atlas & Pepler, 1998; Olweus, 1993, 1999b; Smith & Sharp, 1994). Bullies may rely on greater physical strength and stature, weapons, or group

bullying techniques in order to gain physical power over victims. Psychological power may arise from greater social status, as well as an awareness of victim insecurities or vulnerabilities (Marini, Spear, & Bombay, 1999; O' Connell et al., 1997). The issue of a power differential between the victim and bully is integral for an accurate understanding of the phenomenon of bullying (Olweus, 1993). What is most important is the notion that a quarrel or fight between individuals with the same approximate power (psychological and/or physical) does not constitute bullying.

Second, bullying involves repeated use of aggression against the victim. Bullying is a form of aggression in which a behavioural pattern is typically established (Olweus, 1993). Not only is the victim bullied repeatedly over time, but also a pattern may develop with respect to how, where, and when the victim is bullied (Olweus, 1999b). For instance, a child may be regularly subjected to taunts and teasing on the school bus to and from school. Isolated acts of aggression between peers are usually not regarded as bullying behaviour.

Third, bullying refers to aggressive behaviours acted with intent. There is intent on the part of the bully to cause harm or discomfort to the victim (Olweus, 1993, 1999b; Smith & Sharp, 1994). The intent may be to cause physical harm and/or psychological discomfort. Physical harm refers to some form of direct injury to the body, whereas psychological discomfort refers to a variety of negative emotions, feelings, and attitudes a victim can develop towards self and others (Marini, Spear, & Bombay, 1999). Obtaining interpersonal dominance over an individual or group of people is the ultimate anticipated outcome of bullying behaviour (Coie et al., 1991).

In addition to these characteristics which focus on actual behaviour, Marini, Spear, and Bombay (1999) also emphasize a fourth characteristic which deals with the devastating consequences for the victim. The fourth characteristic of bullying does not focus on the actual act of aggression, but rather on the consequences of such aggression for the victim. Bullying behaviour results in feelings of anxiety, intimidation, and fear for the victim (Marini, Spear, & Bombay, 1999). An interplay of the first three characteristics can lead to a negative atmosphere in which the victim greatly fears for personal safety and well-being. For instance, the asymmetrical power relationship between bully and victim, in which the bully holds greater physical and/or psychological power, typically makes it difficult for the victim to defend him/herself (Olweus, 1999b). This can ultimately result in feelings of powerlessness (Marini, Spear, & Bombay, 1999). In addition, the intent and repeated nature of the bullying behaviour, make the victim acutely aware that the abuse is likely to be an ongoing, chronic problem. An examination of the distinguishing features of bullying make it abundantly clear that the issue of bullying must be addressed thoroughly and immediately.

Types

While bullying is a form of peer aggression, which can be defined by the four characteristics discussed above, bullying can be manifested in a number of different ways. Despite the variations in terminology used to explain types of bullying behaviour, bullying can be categorized/distinguished along two main dimensions,

namely, level of directness of attack, and form of aggression (Marini, Spear, & Bombay, 1999; Salmivalli, Lagerspetz, Bjorkqvist, Osterman, & Kaukiainen 1996).

The level of directness of attack refers to whether the aggression is overt or covert in nature. Overt bullying is associated with those attacks which are 'direct' and open in nature. On the other hand, covert bullying is associated with 'indirect' and secretive attacks (Rigby, 1996; Smith & Sharp, 1994).

The form of aggression refers to whether the bullying is physical or psychological in nature. Physical bullying pertains to physical attacks. Psychological bullying pertains to verbal, social, or emotional attacks (Marini, Spear, & Bombay, 1999).

These two dimensions lead to the creation of four subscales of bullying; overt, covert, physical, and psychological (Marini, Spear, & Bombay, 1999). From these subscales, Marini, Spear, and Bombay (1999) have classified bullying behaviours into four main groups: overt - physical bullying; overt - psychological bullying; covert - physical bullying; and covert - psychological bullying (see Figure 1).

Overt - physical bullying can be defined as direct and open physical attacks on the victim. The bully carries out overt - physical bullying. Examples include hitting, pushing and kicking, as well as breaking or taking the possessions of others.

Overt - psychological bullying can be defined as direct and open verbal, social, or emotional attacks on the victim. Overt - psychologically bullying, which is carried out by the bully, includes making fun of or teasing others, as well as calling others mean or nasty names.

	Physical	Psychological
Overt	pushing, shoving, hitting spitting, hair-pulling, throwing rocks, assaulting with a weapon	name-calling, ridiculing, insulting, making threats, taunts, swearing at, using threatening and obscene gestures, verbal attacks, menacing glances
Covert	instigating a fight, daring someone to assault a victim, participating in initiation rites to become part of a group or to prove loyalty to a gang	spreading malicious rumours, sending unsigned letters, making obscene phone calls, posting signs with special meaning, ostracizing and isolating people

Figure 1. Bullying Identification Model. The model illustrates the four main groups of bullying which are based on both the level of directness of attack, as well as the form of aggression used. Specific bullying behaviours are provided for each group.

Covert - physical bullying can be defined as indirect and/or secretive physical attacks on the victim. Covert - physical bullying typically involves a lead bully who dares others to physically attack the victim. Examples include daring another person to hit, push, or kick someone, or daring others to break or take the possessions of others.

Covert - psychological bullying can be defined as indirect and/or secretive verbal, social, or emotional attacks on the victim. The bully carries out this form of bullying, but often the identity of the bully may remain hidden from the victim. Examples include spreading untrue stories or rumours about others, as well as excluding others from joining a group or game.

Profile of Bullies and Victims

In addition to different types of bullying, a distinction can be made between types of bullies and types of victims. Although it was once believed that bullies, as well as victims, were homogeneous groups, research has revealed certain differences between types of bullies and types of victims (Farrington, 1993; Pellegrini, 1998). In fact, it is now becoming increasingly clear that both bullies and victims are rather heterogeneous groups (Olweus, 1999b). In order to make strides in understanding and ultimately reducing bullying behaviours, it is necessary to make this distinction. It is important to note that despite their differences, certain commonalities still exist between the types of bullies, as well as types of victims (Olweus, 1993). In addition, while various researchers may use different terms to identify such groups, the characteristics of the groups remain largely consistent. Furthermore, the issue must be

raised that these characterizations refer to bullies and victims as overall groups. Certain individual bullies and victims may not precisely fit the profiles identified.

With respect to types of bullies, there are both active and passive bullies (Olweus, 1999b). Active bullies are considered to be children who take a lead role in the attack. On the other hand, passive bullies assume a follower role in the attack (Olweus, 1999b; Salmivalli et al., 1996). Both types of bullies can be considered as generally aggressive. They have a need to dominate and control others as evidenced by bullying attacks on peers, teachers, support staff, and parents (Olweus, 1999b). In addition, they typically do not like to follow rules and have little respect for social norms (Marini & Auld-Cameron, 1991). They also hold positive attitudes of aggression and antisocial behaviour (Olweus, 1999b). Lastly, bullies have been found to lack empathic and social skills which play a key role in positive social interactions (Marini, 1997).

With regard to types of victims, there are active and passive victims. Active victims are those who behave in a provocative and aggressive manner (Olweus, 1999b). Active victims, which are less common, are believed to possess a reaction pattern which is both anxious and aggressive (Olweus, 1999b). Peers of active victims describe them as children who get teased and beaten up. They also describe them as those who say mean things to others, have a quick temper, and start fights (Schwartz, Dodge, Pettit, & Bates, 1997). Active victims typically have concentration difficulties and can generally be classified as hyperactive. They behave in ways which can provoke bullying attacks from other children. The stress and tension they cause is

often used as a justification by bullies for their aggression against active victims (Marini, Spear, & Bombay, 1999).

Alternatively, passive victims are those whose behaviour can be described as submissive and non-assertive (Schwartz, Dodge, & Coie, 1993). This type of victim possesses a submissive reaction pattern. They do not act aggressively towards other children. They can be described as children who are insecure, anxious, and quiet (Olweus, 1999b). Passive victims often respond to bullying by crying or withdrawing from others. Unfortunately, this reaction to bullying further increases their risk for future bullying, as bullies take pleasure in such responses (Olweus, 1999b).

Gender Differences and Developmental Trends

Patterns have emerged with respect to the variables of gender and age. According to Smith and Morita (1999), regardless of certain cultural differences, many countries have reported similar trends concerning bullying within schools.

With regard to gender differences in bullying, patterns are evident for both involvement in bullying and involvement in certain types of bullying. First, it has largely been found that a higher percentage of boys compared to girls are involved in bullying others (Craig et al., 1998; Kumpulainen, Rasanen, & Henttonen, 1999; Olweus, 1983, as cited in Olweus, 1999a; Rigby, 1997). Interestingly, naturalistic observation studies have produced findings which do not support gender difference in the frequency of bullying. Relying on classroom observations, Atlas and Pepler (1998) found that boys and girls were equally likely to bully other children at school.

Second, boys largely use and experience physical and more overt bullying. On the other hand, girls typically rely on and are exposed to psychological and more covert bullying (Olweus, 1983, as cited in Olweus, 1999a; Rivers & Smith, 1994; Smith & Morita, 1999; Whitney & Smith, 1993). While boys and girls are generally involved in different types of bullying, both types warrant extensive study, as they can be equally devastating to the victim (Smith & Sharp, 1994).

Three developmental trends are most evident in bullying research. The first age-related trend is that boys are more involved in bullying than girls across all age groups (Craig et al., 1998; Rigby, 1997). Second, as children become older, there is a decrease in the number of reports on being bullied (Charach et al., 1995; Kumpulainen et al., 1999; O'Connell et al., 1997; Rigby, 1997). Third, it has been found that as children get older, their attitudes and beliefs appear to become more supportive of bullying (O'Connell et al., 1997; Rigby, 1997). While the second trend may simply reveal that bullying decreases with age, it may actually be that children are less willing to report being victims of bullying for reasons of embarrassment and/or fear. If the latter reasoning is correct, the existence of the second developmental trend, coupled with the third trend, clearly points to the need for early and effective anti-bullying programs within schools.

Risk Factors

As is the case with the study of general childhood aggression, it is believed that a multitude of interactive factors promote the development and maintenance of bullying behaviours (Griffiths, 1995; Marini, Spear, & Bombay, 1999; Pepler et al.,

1999). These interdependent factors can consist of both individual characteristics and situational/environmental influences (Boulton & Smith, 1994; Craig et al., 1998).

Individual characteristics that may impact the development and maintenance of bullying, include low empathy (Slee & Rigby, 1993), difficult temperament, psychotic personality traits (Mynard & Joseph, 1997), and acting out in other antisocial ways (Atlas & Pepler, 1998; Craig et al., 1998). Due to the cross-sectional, non-experimental nature of much of the research on individual characteristics, drawing causative conclusions is controversial. What is evident though is that such individual characteristics are clearly correlated to bullying behaviours among school children (Rigby & Slee, 1999).

As mentioned previously, social cognition has also been implicated in aggressive behaviour. At a general level, it is a widely accepted notion that cognitive processes play an important role in all types of social behaviour, including bullying behaviours (Pepler et al., 1999). Huesmann (1998) states that cognitive processes act as mediators which "connect biological, environmental, and situational inputs to behavioural outputs" (p. 73). Specifically, Pepler et al.'s (1999) dynamic systems theory approach to bullying states that at the individual level, certain personal characteristics and experiences can create a behavioural and cognitive tendency to become involved in bullying. Clearly, at this point in time, the focus is not on whether social cognitive processes impact bullying behaviours but rather how such processes impact bullying. For a more thorough discussion of the role of social cognition in the

development and maintenance of bullying among children, refer to the section titled "Social Cognition and Bullying" (see page 41).

With respect to environmental/situational factors, the school (Rigby, 1996), community (Randall, 1996), media (Olweus, 1993), and family (Craig et al., 1998) are all believed to impact social behaviour. Although all of these factors are important, the significant roles of the family and school environment have recently been emphasized in the development and maintenance of bullying among children. First, the family is known to be a very powerful early socializing agent for the development of bullying behaviours (Craig et al., 1998; Farrington, 1993; Schwartz et al., 1997). According to Craig et al. (1998) and Schwartz et al. (1993) children who are bullies tend to come from conflictual families in which parents interact with their children in a hostile manner, and provide both inconsistent and harsh discipline techniques. In addition, Olweus (1993) indicates that some of the main parenting factors which contribute to bullying behaviours are lack of warmth, little involvement in the lives of their children, lack of limits on aggressive behaviour, and poor role modeling of conflict management strategies. Furthermore, in Farrington's (1993) study, father-son generational bullying links were found. His empirical data indicated that fathers who bullied at school had a greater likelihood of having sons who bully at school.

With respect to the school environment, Craig et al. (2000) and Pepler et al. (1999) believe the social context of the school plays a role in the promotion and maintenance of bullying behaviours. In their dynamic systems theory approach to bullying, they state that bullying among school children largely occurs as a result of an

interrelated process that operates at various levels within the school system (Pepler et al., 1999). They argue that bullying does not occur in a social vacuum, and thus, it needs to be considered in the context of a social dynamic system. According to this perspective, there are processes at the individual level (e.g., cognitions and behaviours of bullies and victims), dyadic level (e.g., interaction of the bully's and victim's cognitive and behavioural tendencies), peer group level (e.g., cognitions, behaviours, and emotions of school peer group), and overall school climate level (e.g., cognitions, behaviours, and emotions of teachers and administrators) which can promote and maintain bullying. Each of these levels is believed to interact and influence one another (Craig et al., 2000; Pepler et al., 1999;).

Consequences

An analysis of the consequences of bullying emphasizes the priority researchers and educators must give towards understanding and ultimately, reducing bullying behaviours within schools. According to Olweus (1993), there are significant short-term as well as long-term consequences associated with being involved in bullying situations.

Victims of bullying can be affected in a variety of ways. These children can experience a host of physical ailments (Olweus, 1993), experience a decline in academic performance (Marini, Cooper, Ostaniewicz, & Feldman, 1999), and develop poor social skills due to the social isolation they experience (Smith & Sharp, 1994). Although some victims try to escape their pain and despair through drug abuse and suicide (Smith & Sharp, 1994), many victims seem fortunate enough to be able to

overcome their traumatizing experiences (Olweus, 1993). According to Olweus (1993) this is largely due to the fact that children who are victims of bullying are able to leave behind the "victim" role when they leave school. In addition, victims want to get help and typically respond positively to intervention strategies. Nevertheless, the experience of being bullied is one that likely stays in the minds of victims throughout their whole lives (Griffiths, 1995).

With respect to bullies, it appears that bullying others is often a precursor for later aggression and violence (Loeber & Hay, 1997). These children may become involved with the police, judicial system, mental health agencies, and other social organizations throughout their lives (Connell & Farrington, 1996; Olweus, 1993). In addition, bullies have been found to have a limited social group as they grow up, and are at an increased risk for abusing drugs and alcohol (Smith & Sharp, 1994).

While there can be severe consequences for both victims and bullies, all children within the school can be negatively impacted. A compilation of data from four Canadian studies (O'Connell et al., 1997) reveals that over 80% of the children exposed to school bullying incidences found the experience unpleasant. Furthermore, both Charach et al. (1995) and Rigby and Slee (1992) found that a majority of children in their studies opposed bullying and wanted it to stop. According to Griffiths (1995), childhood bullying can negatively impact the whole school climate, resulting in an environment which is not conducive to healthy learning and development. Bullying among children must be regarded as an issue which not only affects individuals but

also one which affects the school population as a whole, and ultimately the school learning environment.

<div align="center">Social Cognition and Bullying</div>

Investigation into the role of social cognition in the development and maintenance of bullying among children represents a significant research shift. The preliminary phase of bullying research largely provided a descriptive analysis of the nature and extent of bullying among children (Craig et al., 1998). Currently, the focus of research has expanded to include a study of the factors which may contribute to bullying (Rigby, 1997; Sutton et al., 1999a). This shift in research focus is largely due to the influence of the trends and patterns present in the findings of general childhood aggression research (Sutton, et al.1999a).

For instance, it is a widely supported notion that aggression, at a general level, develops and is maintained as a result of an interplay between multiple factors (Coie & Dodge, 1998; Loeber & Hay, 1997). Furthermore, cognition, and more specifically, social cognition, has been emphasized as playing a very important role in aggressive behaviour due to its mediating effect (Coie & Dodge, 1998; Huesmann, 1998; Loeber & Hay, 1997).

Such findings have led to recent interest in social cognition and its specific role in bullying behaviours (Slee, 1993). According to Crick and Dodge (1999) and Sutton et al. (1999a), although bullying is a subtype of aggression, the study of children who are generally aggressive, should only be seen as a starting point from

which to theorize and conduct studies concerning bullying. Hence, there is a great need for studies such as this one, which specifically target children's bullying behaviour and social cognition.

At this point in time, a limited amount of research has been conducted on social cognition and childhood bullying (Slee, 1993; Sutton et al., 1999a). Although arguments could be made that some of the research discussed in the subheading "Social Cognition and Aggression" may have actually measured the social cognition of children involved in bullying behaviours, either the term "bullying" was never explicitly stated or "bullying" was just one of a group of many aggressive behaviours being measured. As a result, the findings of any such research were only discussed in terms of social cognition and general childhood aggression

Research which has focused specifically on bullies and their social cognition (Slee, 1993; Sutton, Smith, & Swettenham, 1999b) has remained fairly consistent with previous research in regard to the methodology of bullying research. For instance, Slee (1993) and Sutton et al. (1999b) followed the quantitative, non-experimental approach for their data collection which has been widely used (Boulton & Underwood, 1992; Charach et al., 1995; Mynard & Joseph, 1997; Pellegrini, 1998; Pepler et al., 1994).

Slee's (1993) research represents an exploratory investigation of children's social cognition and bullying. Social cognition was assessed through children's responses to hypothetical stories about conflict. Teacher nominations and self-reports were used to identify bullies, victims, and children not involved. Slee (1993) found

significant differences in the social cognition of bullies, victims, and children not involved. First, significant differences were found in the children's explanations for aggressive behaviour. In comparison to the other two groups, bullies relied much more heavily on external (situational) factors such as peer pressure rather than on internal factors such as personality when explaining the occurrence of aggression. Second, regarding their evaluation of solutions to a problematic situation, bullies were significantly more likely than other children to choose an aggressive response as their second best solution to a problem. Third, there was a significant difference between bullies and victims with respect to their beliefs regarding the consequences of aggression. Bullies were more likely to view getting into trouble as the main consequence of aggressive behaviour, while victims cited fear of retaliation. These results are generally in agreement with the findings from aggression research and are quite consistent with the thesis of social information-processing theory. The work of Slee (1993) should be considered quite important, as it is preliminary research from which more thorough investigations can emerge.

As already stated, the study of general childhood aggression and other similar conduct disorders has impacted both theoretical and empirical investigations of childhood bullying (Crick & Dodge, 1999; Sutton et al., 1999a). Although there is agreement that in order to learn about the social cognition of children who bully, it is necessary to conduct research which specifically deals with children who bully (Crick & Dodge, 1999; Sutton, et al. 1999a), a debate has recently surfaced regarding the

extent to which the research field of childhood bullying should be influenced by the field of general childhood aggression (Crick & Dodge, 1999; Sutton et al., 1999a).

General childhood aggression literature has empirically supported the idea that deficiencies and/or distortions in social cognition are important factors in accounting for aggression (Coie & Dodge, 1998). This understanding of aggressive children's social cognition has largely been based on the social information processing theory described earlier (Sutton et al., 1999a). It postulates that aggressive behaviour is a function of deficits and/or distortions occurring both in general schemas and particular steps in social information processing.

Sutton et al. (1999a) challenge the belief that bullies are individuals who typically have poor social cognition. They argue that this description of bullies has been prematurely formulated. Sutton et al. (1999a) suggest that the social skills deficit paradigm may more accurately describe children who are reactively aggressive as opposed to children who engage in bullying, a proactive form of aggression. Instead, they believe bullies should be studied from a "theory of mind" or perspective-taking approach. This approach involves assessing one's understanding of another's mental state or emotion (Sutton et al., 1999b).

Sutton et al. (1999a) propose that some bullies, at least, may require good social cognition in order to successfully act out aggression. They argue that bullying among children needs to be studied from a unique point of view, due to the social context and skills necessary for bullying. Sutton et al. (1999a) emphasize that some types of bullying (active bullying and covert bullying), require skills such as the

ability to manipulate others, organize others, and avoid detection while inflicting harm on others (Sutton et al., 1999a). They suggest that bullies should not be labeled as lacking in social information-processing skills just because they "differ" from other children with respect to certain steps of the social information processing model. In other words, they hypothesize that "many bullies may in fact be skilled manipulators, not social inadequates" (Sutton et al., 1999a, p. 118).

Crick and Dodge (1999), are on the other side of the debate, and thus, take exception to many of Sutton et al.'s (1999a) arguments. First, Crick and Dodge (1999) are in opposition to Sutton et al.'s (1999a) contention that bullying results from exclusively competent cognitions. Crick and Dodge (1999) believe that even if children who bully have good perspective-taking skills, they also have other cognitive processes which are deficient and/or distorted. Crick and Dodge also disagree with Sutton et al.'s (1999a) critique of the social skills deficit view of aggression presented in the social information processing theory. Despite Sutton et al.'s (1999a) contention that their view of bullying and social cognition is contrary to the social-information processing framework of aggression, Crick and Dodge (1999) have identified many similarities between the two positions. In defense of their reliance on the social information processing framework for the study of bullies, Crick and Dodge (1999) point out that the framework is not in opposition to the idea that aggressive behaviour may be predicted based on skilled processing occurring at one or more of the steps. Second, the framework does not imply that deficits/and or distortions in processing are necessary for all aggressive behaviour to occur. Third, the framework is open to the

possibility that aggression may be an adaptive and skilled behaviour in certain cases. Based on the aforementioned points, it is clear to Crick and Dodge (1999) that the social information-processing framework is accepting of the prospect that patterns in perspective-taking (theory of mind) will be associated with aggression.

Although Crick and Dodge (1999) acknowledge the commonalities between the two paradigms, they also have certain concerns regarding the ideas posited by Sutton et al. (1999a). The most significant criticism revolves around the limitations of the "theory of mind" approach for the study of aggression. Sutton et al. (1999a) propose that there is a good probability that skillful perspective-taking is positively related to bullying behaviours. Citing a general analysis of prior research, Crick and Dodge (1999) state that while some contradictions are evident in the literature, findings largely indicate a negative relationship between perspective-taking and aggression. Furthermore, Crick and Dodge (1999) believe focusing on only one social cognitive mechanism is insufficient for a complete understanding of social cognition and bullying behaviour. Therefore, they recommend that perspective-taking be considered as a component of social information processing rather than as an isolated, static knowledge construct.

In response to Crick and Dodge's (1999) commentary, Sutton, Smith, and Swettenham (1999c) support Crick and Dodge's (1999) contention that there is a great need for research which aims to explore in a more precise and thorough manner, the social cognition of bullies. Despite this agreement, Sutton et al. (1999c) still defend their "theory of mind" perspective. Sutton et al. (1999c) acknowledge Crick and

Dodge's (1999) point that contradictions exist in the literature regarding the associations between perspective-taking and aggressive behaviour. In addition, they are also aware of the lack of specificity in the type of aggression measured. In fact, according to Sutton et al. (1999c), it is these exact arguments which have led to the justification of the study of perspective-taking skills among children who specifically bully, as well as, those who do not.

Certainly both sides of the debate have brought forth interesting perspectives and made valuable contributions towards the development of a more comprehensive approach to the study of bullies' social cognition. What is evident from their discourse, and a point at which they both clearly agree, is that future research is necessary in order to gain a more complete and accurate understanding of the social cognitions associated with bullying behaviours.

To test their "theory of mind" approach for the study of bullies' social cognition, Sutton et al. (1999b) conducted an exploratory investigation. They set out to compare the social cognition of the various participants involved in the bullying process. Through self and peer nomination, children were identified as either bully, assistant, reinforcer, defender, outsider, or victim. Consistent with Slee's (1993) research, a set of stories and accompanying questions were used to assess social cognition. More specifically, this study set out to test the participants' understanding of mental states and emotions. In accordance with their view that some bullies may be skilled manipulators, Sutton et al. (1999b) expected that some bullies would demonstrate greater "theory of mind" than other children.

The results of the study support Sutton et al.'s (1999b) contention that some bullies possess good social cognitive skills. The key finding was that there was a significant difference in "theory of mind" scores between the various participant groups involved in the bullying process. The total social cognition score, which took into account the participants' understanding of both mental state and emotion, was higher for the bully group than any other group involved in the bullying process. Only the outsider group scored higher than the bully group. Although this is only one individual study, the findings are important as they suggest that the traditional view of bullies as social inadequates may be misleading. Consequently, what is undeniable is that many more studies need to be conducted before a comprehensive understanding of the social cognition of bullies can be reached.

Self-Serving Cognitive Distortions

Cognitive distortions and their relations to problematic social behaviours have been theorized and researched for some time (Liau et al., 1998). Despite this empirical history, it appears that at the present time, no comprehensive studies have been conducted specifically on children's self-serving cognitive distortions and their relationship to bullying behaviours. Cognitive distortions which are a form of misperception, can be defined as "inaccurate or rationalizing attitudes, thoughts, or beliefs concerning one's own or others' social behaviour" (Beck, 1976, as cited in Gibbs et al., 1996, p. 289). As already stated, both general schemata and certain steps involved in social information-processing may contain such cognitive

distortions (Crick & Dodge, 1994). Cognitive distortions act as justifications for one's own behaviours, and thus, the role they play in the facilitation of aggressive behaviours such as bullying can be powerful (Marini, Spear, & Bombay, 1999).

Specific types of distortions have been associated with internalizing behaviours (e.g., anxiety, depression, and withdrawal), as well as externalizing behaviours (e.g., aggression, rule-breaking behaviour, hyperactivity; Barriga et al., 2000). In order to distinguish between the specific cognitive distortions associated with the two problem behaviours, Barriga et al. (2000) have named those cognitive distortions related to internalizing behaviour as "self-debasing" and those related to externalizing behaviours as "self-serving." Although the focus of this thesis is self-serving cognitive distortions, a brief explanation of self-debasing cognitive distortions is worthwhile in order to develop a more comprehensive understanding of cognitive distortions. Self-debasing cognitive distortions can lead to self-harm due to direct or indirect debasing of the self (Liau et al., 1998). On the other hand, self-serving cognitive distortions "help to protect the self from blame or a negative self-concept and thereby disinhibit aggression or other anti-social behaviour [against others]" (Barriga et al., 2000, p. 36).

Despite both theory and research which supports an association between self-serving cognitive distortions and externalizing behaviours, Barriga, Liau, & Gibbs (1998) acknowledge certain limitations in the instruments utilized for the measurement of self-serving cognitive distortions. For instance, while some instruments have been found to have reliability and validity problems, others

have limited applicability to populations other than those incarcerated. Furthermore, some instruments have been limited due to a content focus that is either overly restrictive or inclusive (Barriga et al., 1998).

Taking into account these limitations, Gibbs, Barriga, et al. (1996) designed the "How I Think" (HIT) questionnaire. The conceptual framework of the questionnaire is derived from Gibbs and Potter's (1992) four-category typology of self-serving cognitive distortions. Although a number of different types of cognitive distortions have been proposed, this thesis has classified cognitive distortion in terms of Gibbs and Potter's (1992) work. It is important to note, that the four categories were constructed based on theory, practice, and research (Gibbs, Barriga, et al., 1996).

The first type of self-serving cognitive distortion, is referred to as Self-Centred. Self-centred thinking is a primary self-serving cognitive distortion, which involves egocentric bias. A statement which reflects such a self-serving cognitive distortion is, "When I get mad, I don't care who gets hurt" (Gibbs, Barriga, et al., 1996, p. 3). Such individuals often view any resistance to their wants or wishes as extremely unfair. While the overt aggressive behaviour linked to such a primary self-serving cognitive distortion can often be constrained by guilt based on empathy or threats to self-concept, the presence of secondary self-serving cognitive distortions can reduce or remove these inhibitions. Thus, secondary self-serving cognitive distortions play a significant role in the continuation of antisocial and aggressive behaviours as they counteract any sense of remorse or conscience (Gibbs, Potter, et al., 1996).

The three types of secondary self-serving cognitive distortions are:

Assuming the Worst, Blaming Others, and Minimizing/Mislabeling. Assuming the Worst refers to the attribution of hostile intentions to others. Aggressive individuals such as bullies may mis-identify the intention of others as hostile and thus, feel justified in retaliating in an antisocial or aggressive manner. A statement such as, "If you don't push people around, you will always get picked on" is a good example of this type of self-serving cognitive distortion (Gibbs, Barriga, et al., 1996, p. 4).

Blaming Others is a self-serving cognitive distortion which often follows the distortion of Assuming the Worst. Blaming Others is a form of misattribution in which the blame is externalized to others. Blaming Others is a powerful type of distortion, which often twists reality and thus, removes any feelings of empathy-based guilt or conflict to self-concept. A statement such as, "I lose my temper because people try to make me mad" is an example of this form of self-serving cognitive distortion (Gibbs, Barriga, et al., 1996, p. 7).

The third type of secondary self-serving cognitive distortion occurs when an individual perceives his/her antisocial or aggressive behaviour as acceptable. It is known as Minimizing/Mislabeling. This type of distortion is evident in the statement, "People need to be roughed up once in a while" (Gibbs, Barriga, et al., 1996, p. 2). While self-serving cognitive distortions can be socially expressed in various forms, they typically result in individuals who are unwilling to take responsibility for their behaviours and actions (Marini, Spear, & Bombay, 1999).

Gibbs and his colleagues have begun to empirically explore the relationship between self-serving cognitive distortions (as measured by the HIT) and antisocial

Assuming the Worst, Blaming Others, and Minimizing/Mislabeling. Assuming the

Worst refers to the attribution of hostile intentions to others. Aggressive individuals

such as bullies may mis-identify the intention of others as hostile and thus, feel

justified in retaliating in an antisocial or aggressive manner. A statement such as, "If

you don't push people around, you will always get picked on" is a good example of

this type of self-serving cognitive distortion (Gibbs, Barriga, et al., 1996, p. 4).

Blaming Others is a self-serving cognitive distortion which often follows the

distortion of Assuming the Worst. Blaming Others is a form of misattribution in

which the blame is externalized to others. Blaming Others is a powerful type of

distortion, which often twists reality and thus, removes any feelings of empathy-based

guilt or conflict to self-concept. A statement such as, "I lose my temper because

people try to make me mad" is an example of this form of self-serving cognitive

distortion (Gibbs, Barriga, et al., 1996, p. 7).

The third type of secondary self-serving cognitive distortion occurs when an

individual perceives his/her antisocial or aggressive behaviour as acceptable. It is

known as Minimizing/Mislabeling. This type of distortion is evident in the statement,

"People need to be roughed up once in a while" (Gibbs, Barriga, et al., 1996, p. 2).

While self-serving cognitive distortions can be socially expressed in various forms,

they typically result in individuals who are unwilling to take responsibility for their

behaviours and actions (Marini, Spear, & Bombay, 1999).

Gibbs and his colleagues have begun to empirically explore the relationship

between self-serving cognitive distortions (as measured by the HIT) and antisocial

behaviour. This research has relied on a quantitative, correlational approach in which the HIT was used to measure self-serving cognitive distortions while other pencil and paper questionnaires have been used to measure the variable of antisocial behaviour. Overall, the research conducted by Barriga and Gibbs (1996), Barriga et al. (2000), and Liau et al. (1998), has indicated support for the position that self-serving cognitive distortions play a significant role in the development and maintenance of antisocial behaviour.

In each of the aforementioned studies, participants were comprised of adolescents classified as either delinquent or nondeliquent. The participants completed the HIT as well as self-report questionnaires aimed at measuring antisocial behaviour. Instruments such as the Youth Self-Report for Ages 11-18 (Achenbach, 1991, as cited in Barriga et al., 2000) and the Nye-Short Self-Reported Delinquency Questionnaire (Mitchell & Dodder, 1990, as cited in Barriga & Gibbs, 1996) were used to measure antisocial behaviour. In addition, to self-report measures, Barriga et al. (2000) measured antisocial behaviour by accessing institutional misconduct reports. As indicated above, the results of all three studies were generally consistent with the thesis of social information-processing theory. In other words, youths who behaved aggressively and in an antisocial manner were found to possess self-serving cognitive distortions. A significant positive moderate relationship was found between HIT scores and measures of antisocial behaviour (Barriga & Gibbs, 1996; Liau et al., 1998).

Summary of Literature Reviewed

Bullying can be classified as aggressive behaviour that is proactive in nature (Boulton & Smith, 1994). Proactive aggression is largely shaped by anticipated incentives or outcomes. These incentives or outcomes are believed to "pull" the deliberate behaviour. Bullying, which is a type of aggression occurring between peers, involves repeated and intentional abuse of physical and/or psychological power (Marini, Spear, & Bombay, 1999). Bullying behaviours often lead victims to develop feelings of intimidation, anxiety, and fear (Marini, 1996). In the case of bullying, the anticipated outcome is to gain interpersonal dominance of another individual or group of individuals (Coie et al., 1991).

Despite the fact that the phenomenon of bullying has long been in existence, the research on bullying among school children is relatively recent and limited. The bullying research conducted by Olweus during the 1970s and 1980s in Scandinavia, is greatly believed to have provided the impetus for today's current interest in understanding and preventing bullying among school children (Charach et al., 1995). Research conducted around the world has shown that problem of bullying among school children is an international phenomenon. The comparable rates of bullying found in various countries reveal the pervasive and serious nature of the problem.

While there may be differences in terminology, researchers from around the world have been able to identify certain characteristics of bullying. For instance, researchers recognize the existence of distinct types of bullying. According to Marini, Spear, and Bombay (1999), bullying can be distinguished along two dimensions: level

of directness of attack, and form of aggression. Based on these two dimensions, four main types of bullying have been identified: overt - physical bullying; overt - psychological bullying; covert - physical bullying; and covert - psychological bullying. Distinctions can further be made with regard to types of bullies and types of victims (Farrington, 1993; Pellegrini, 1998). For example, bullies and victims have been identified in both active and passive roles (Olweus, 1999b).

In addition to the awareness of distinct types of bullying and participant roles, research has also revealed certain gender and developmental trends in bullying. For example, the majority of bullying research has found that boys are more involved in bullying others than girls (Craig et al., 1998; Kumpulainen et al., 1999; Rigby, 1997). Furthermore, it has been found that boys are more likely to use and experience physical overt bullying, while girls tend to use and experience more psychological and covert bullying (Rivers & Smith, 1994; Smith & Morita, 1999). In regard to developmental trends, one of the most interesting is that with age, children appear to become more supportive of bullying (Rigby, 1997).

With respect to the consequences of being involved in bullying situations, researchers have found short- and long-term consequences for bullies and victims. For example, bullying others as a child, often predicts aggression and violence in later life (Loeber & Hay, 1997). The consequence of being victimized in bullying can manifest itself in a variety of ways. Victims of bullying have been found to experience physical ailments (Olweus, 1993), as well as declines in academic performance (Marini, Cooper, et al., 1999). In addition to the aforementioned

consequences, bullying can also have an indirect effect on uninvolved students, as well as the overall school climate (Griffiths, 1995).

In terms of the risk factors involved in the development and maintenance of bullying behaviours, it is thought that a multitude of interactive factors are responsible (Marini, Spear, & Bombay, 1999; Pepler et al., 1999). These factors can be both individual characteristics as well as environmental/situational characteristics (Craig et al., 1998). Furthermore, it is accepted that cognitive processes play an important mediating role in the development of all social behaviours (Huesmann, 1998). For instance, according to Pepler et al.'s (1999) dynamic systems theory approach to bullying, at the individual level there may be certain personal characteristics and experiences that can create a behavioural and cognitive tendency to become engaged in bullying. Thus, the focus of current research is not on whether social cognitive processes impact bullying, but how social cognition is influential in bullying behaviours.

Since bullying is a type of aggression, it is logical that much of the research on bullying has been guided by general aggression research. Developing an understanding of research that has investigated the role of social cognition in aggressive behaviour provides an important framework from which to begin to understand how social cognition may play a role in bullying behaviours.

Social cognition can be described as one's thoughts regarding social situations. Social cognition is believed to be comprised of and a function of, information

processing steps and cognitive schemas (Ingram & Kendall, 1986, as cited in

Lochman & Dodge, 1994). According to general social cognitive theory, aggression

is not an inevitable process. Rather, it is viewed as a process which depends on

information-processing patterns and general schemas (Coie & Dodge, 1998; Dodge &

Crick, 1990).

Research which has focused on the social cognition of aggressive children has

greatly relied on social information-processing theory (Coie & Dodge, 1998).

According to the theory, social cognitive deficits and/or distortions are thought to be

significant factors in the development and maintenance of aggressive behaviour.

Many studies on social cognition and aggressive behaviour in children have

shown support for the thesis of the social information-processing theory. It has been

found that aggressive children possess a variety of social cognitive processes that are

deficient and/or distorted in some manner. These deficient and/or distorted cognitive

processes are thought to increase the likelihood of behaving aggressively (Coie &

Dodge, 1998; Crick & Dodge, 1994). Social cognition is viewed as integral to

behaviour, due to its mediating role (Coie & Dodge, 1998; Huesmann, 1998; Loeber

& Hay, 1997).

These research findings on general aggression have acted as a catalyst for the

very recent study of social cognition and its specific role in bullying behaviours (Slee,

1993; Sutton et al., 1999a). Researchers such as Crick and Dodge (1999) and Sutton

et al. (1999a) acknowledge the importance of conducting research with children who

bully, in order to learn about the social cognition of children who engage in this specific form of aggression. Despite the agreement between the two groups of researchers on that issue, the groups hold conflicting views on the extent of influence general childhood aggression research should have on the research field of bullying.

As stated previously, general childhood aggression research has supported the notion that social-cognitive deficiencies and/or distortions play an critical role in aggressive behaviour (Coie & Dodge, 1998). This has largely been supported using the social information-processing framework for aggression. Sutton et al. (1999a) have challenged the traditional belief that children involved in any form of aggressive behaviour usually have poor social cognition. They believe that children who bully may have social cognitive processes that vary from the social cognitive processes of children who engage in other forms of aggression. Sutton et al. (1999a) suggest that due to the social context, as well as the skills needed to successfully act out bullying, some bullies, at least, may require good social cognition such as perspective-taking skills. They argue that the ability to manipulate others, organize situations, and avoid detection would require certain skills.

In fact, Sutton et al. (1999a) believe the social skills deficit paradigm is a more accurate description of reactively aggressive children. According to Sutton et al. (1999b), a more valuable approach to studying the social cognition of child bullies would be to measure the understanding of another's mental state or emotion.

Crick and Dodge (1999) are on the other side of the debate, as they do

not agree with Sutton et al.'s (1999a) contention that bullying could occur as a function of exclusively competent cognitions. Crick and Dodge (1999) assert that even if bullies are skilled at taking the perspective of others, other cognitive processes are deficient and/or distorted. Crick and Dodge (1999) view Sutton et al.'s (1999a) critique of the social skills deficit view of aggression as flawed. Crick and Dodge (1999) defend their use of the social information-processing framework to study children who bully. They emphasize that the social information- processing approach does not conflict with the notion that skilled processing can occur at one or more of the steps. In addition, they point out the framework does not suggest that deficits and/or distortions in processing are a requirement of aggressive behaviour.

Interestingly, there is empirical evidence which supports both sides of this theoretical debate. Sutton et al.'s (1999b) investigation supports Sutton et al.'s (1999a) belief that bullies have good perspective-taking skills. They found that bullies had greater understanding of mental state and emotion that any other group involved in the bullying process. The only group to score higher than the children who were bullies, were the children who were not involved in bullying at all. On the other hand, Slee's (1993) research was in general support of Crick and Dodge's (1999) position. They found certain deficits and/or distortions in the social cognition of children who bully.

Both the theoretical debate and the conflicting empirical findings clearly indicate that further research is required so that a good understanding of the social cognition of children involved in bullying behaviours can be fostered.

Although cognitive distortions have been studied for many years in terms of their relationship to social behaviours (Liau et al., 1998), it appears that there is an absence of studies which have focused on children's self-serving cognitive distortions and their relationship to bullying behaviours. Self-serving cognitive distortions refer to inaccurate or rationalizing attitudes and thoughts about social behaviour that protect the self from blame or guilt, resulting in the continuance of aggressive behaviour (Barriga et al., 2000). Even though a relationship has been theoretically and empirically documented between self-serving cognitive distortions and aggressive behaviours, there have been some problems with the instruments relied upon for measurement. Taking the limitations into account, Gibbs, Barriga, et al. (1996) designed a self-report questionnaire, "How I Think" (HIT), based on Gibbs and Potter's (1992) four-category typology of self-serving cognitive distortions. According to Gibbs, Barriga, et al. (1996), the questionnaire was designed based on theory, practice, and research.

Using the HIT, Gibbs and his colleagues investigated the relationship between self-serving cognitive distortions and antisocial behaviour. Studies conducted by Barriga and Gibbs (1996), and Liau et al. (1998), both supported the notion that self-serving cognitive distortions are associated with antisocial behaviour. A significant positive moderate relationship has been found between self-serving cognitive distortions and antisocial behaviours (Barriga & Gibbs, 1996; Liau et al., 1998). These results are generally congruent with the thesis of social information processing theory.

CHAPTER THREE: METHODOLOGY

Overview

The purpose of this chapter is to outline the methodology of the present study. This section contains detailed information on the research design, as well as the participants, instruments, and procedures used to gather data.

Research Methodology

The present study can be classified as quantitative, correlational, cross-sectional research. Relying on self-report questionnaire methodology, this study addressed the relations between children's self-serving cognitive distortions and bullying behaviours. Much of the research on the topic of social cognition and its relationship to antisocial and aggressive behaviour has successfully relied on similar methodologies. Studies have typically used self-report questionnaires and/or interviews in order to collect data for the variables of study (Egan et al., 1998). According to Pellegrini (1998), self-report methodology is valuable as it provides researchers with insider perspectives on bullying. For this reason, as well as those described below, self-report questionnaires were used to assess both self-serving cognitive distortions (Appendix A) and bullying behaviours (Appendix B).

In regard to the assessment of self-serving cognitive distortions, the cognitive nature of this variable made the use of self-report methodologies necessary. With respect to the assessment of bullying behaviours, although Pepler and her colleagues greatly advocate the use of naturalistic observation for the assessment of bullying, such a technique was not viewed as feasible for this study. This technique

not only requires the use of video cameras, remote microphones, and pocket-size transmitters, but also the hiring of trained observers (Craig et al., 2000). Therefore, this study relied on a self-report questionnaire in order to assess self-serving cognitive distortions and bullying behaviours.

Research Design

The two main variables of this study were self-serving cognitive distortions and bullying behaviours. Many of the studies which have investigated cognition and aggressive behaviour, relying on similar methodologies, have made general conclusions regarding the contributory role cognitions play in the development and maintenance of this behaviour (see Craig et al., 1998; see Liau et al., 1998). This is largely due the nature of the variables, as well as the theoretical agreement among many researchers and actual empirical evidence which greatly supports the mediating effect of cognitive processes on all types of social behaviours (Huesmann, 1998). As a result, although the main focus of this thesis was to the determine the strength and direction of the relationship between the two variables, self-serving cognitive distortions are also discussed somewhat in terms of the role they may play in bullying behaviour.

The main hypotheses of this study were generally congruent with the underlying thesis of social information-processing theory, as well as what is currently understood about self-serving cognitive distortions and their role in aggressive behaviour. Two main hypotheses were tested.

H1) It was predicted that there would be a significant, direct relationship between children's self-serving cognitive distortions and bullying others.

H2) It was predicted that there would be no significant relationship between children's self-serving cognitive distortions and victimization.

Although other aspects of bullying were also examined in this research (see page 6), specific hypotheses were not made due to secondary role they played in this research.

Pilot Studies

Pilot studies were conducted to check for validity and reliability of the instrument. The first pilot study was conducted with 6 children who were currently enrolled in Grades 5, 6, 7, or 8 (the age of the intended sample). This meeting was held at a central location that was easily accessible to all participants. The purpose of this meeting was to examine the actual content of the questionnaire and to determine if the vocabulary and conceptual ideas were age-appropriate. The participants were asked to silently read (but not answer) the items on the questionnaire and underline any words or questions which they could not read or understand. After this, a group discussion was held in which the participants voiced any concerns or problems they might have. Their concerns were taken into account and subsequent modifications were made in order to better ensure that the questionnaire was written using age-appropriate vocabulary and concepts.

The second pilot study involved conducting a small-scale version of the proposed study. The purpose of this was to determine the reliability of the instrument, as well as highlight any problems in the research plan. The pilot study was conducted at one school in South Western Ontario, with children from Grades 5, 7, and 8. While the intent was to obtain a sample of Grade 6 students as well, no children in Grade 6 received permission to participate. Based on the returns of the informed consent letters, 14 children were able to participate in the pilot study. The sample included; 5 grade 5 students (4 females, 1 male); 7 grade 7 students (5 females, 2 males); 2 grade 8 students (zero females, 2 males).

The questionnaire was group-administered to the participants in a vacant, central location within the school where there would be few distractions. The researcher administered the questionnaire to the participants and was the only adult present in the room. Since the questionnaire is comprised of two parts, each part was administered to the participants on a different day. The administration took place at the same time on both days. See Appendix C for the complete administration procedure.

Preliminary statistical analyses of the pilot study were performed on the participants' responses. An internal consistency of .91 (Part I) and .92 (Part II) was obtained, thus revealing that both parts of the questionnaire had good reliability. After the administration of the second part of the pilot study and preliminary statistical analysis, it was concluded that, at that point, no modifications were necessary to the basic research plan.

Participant Selection

The data were collected from a sample of 206 elementary school children from one school board in South Western Ontario. The sample consisted of: 68 students (31 males, 37 females) from Grade 5; 45 students (18 males, 27 females) from Grade 6; 41 students (18 males, 23 female) from Grade 7; and 52 students (24 males, 28 females) from Grade 8. Children between grades 5 and 8 were chosen due to the fact that the HIT required a fourth-grade reading level. The target population to which the results of the study are intended to apply is elementary school children within Grades 5, 6, 7, and 8.

The participants of this study were chosen using convenience sampling. Despite some of the drawbacks traditionally associated with this type of sampling, it was believed that a sample representative of the population was still obtained, and thus the technique would produce valuable findings. The sample was comprised of children from various communities within the specific region studied. Thus the sample is believed to represent a cross-section of students within the particular region.

Instrumentation

Each participant completed a pencil and paper, self-report questionnaire. All participants, regardless of grade, were surveyed by the same questionnaire. The questionnaire was divided into two parts, with each part administered separately. Part I, which was designed to measure extent and type of self-serving cognitive distortions exhibited, contained 53 items (see Appendix A). Part II, which aimed to

measure the extent and type of involvement in bullying behaviours, contained 24 items

(see Appendix B). Part II of the questionnaire asked questions dealing with each of

the four subgroups of bullying. Each part took approximately 15-25 minutes to

complete. Participants were required to respond to 77 items using a Likert scale.

Demographic information such as age, grade, and gender was also required.

Part I of the questionnaire was an adapted version of the "How I Think" (HIT)

questionnaire (Gibbs, Barriga, et al., 1996). The original HIT was constructed to

measure self-serving cognitive distortions as they relate to externalizing problem

behaviours. It has been found to demonstrate both high test-retest reliability (.91) and

internal consistency reliability (.96), as well as good construct validity (Barriga &

Gibbs, 1996). For a more detailed account of the reliability and validity of the original

HIT, refer to Barriga et al. (1998).

The original HIT, is a 54-item measure of self-serving cognitive distortions

requiring only a fourth-grade reading level. The cognitive distortion items in the

questionnaire are based on Gibbs and Potter's (1992) four categories of self-serving

cognitive distortions: Self-Centred, Minimizing/Mislabeling, Assuming the Worst, and

Blaming Others. Furthermore, the items were constructed with reference to the four

categories of antisocial behaviour (Physical Aggression, Opposition/Defiance, Lying,

and Stealing) obtained from the conduct disorder and oppositional-defiant disorder

syndromes identified in the Diagnostic and Statistical Manual of Mental Disorders,

Fourth Edition (Liau et al., 1998). The four cognitive distortion categories, as well as

the four behavioural categories compose eight HIT subscales. In other

words, Gibbs, Potter, et al., (1996) have constructed items according to a Cognitive Distortion by Behavioural Referent, 4 x 4 design, taking into account each form of cognitive distortion with each form of antisocial behaviour.

The HIT requires participants to respond along a 6-point Likert scale to indicate their level of agreement to a variety of statements. The 6-point Likert scale ranges from "disagree strongly" (1.0) to "agree strongly" (6.0). There are cognitive distortion statements expressing attitudes, thoughts, and beliefs, as well as control items such as anomalous responding and positive fillers.

For the purpose of this particular study, certain modifications were made to the original HIT (Gibbs, Barriga, et al., 1996). The major change involved the construction of an additional behavioural referent category, namely, Psychological Aggression. This resulted in a Cognitive Distortion by Antisocial Behaviour, 4 x 5 design, creating 9 HIT subscales. Specifically, two Psychological Aggression items were created for each of the four cognitive distortion categories, creating eight new questionnaire items. The new items were randomly interspersed throughout the questionnaire. This inclusion was regarded as important since psychological aggression is such an integral part of bullying behaviour (Marini, Spear, & Bombay, 1999; Olweus, 1993; Smith & Sharp, 1994). Due to these additions, certain existing items needed to be excluded in order to keep the length of the questionnaire similar to the original HIT. This was accomplished by creating a 4 x 5 design in which each cognitive distortion category contained only two items referring to a given behavioural category, rather than having some which contained three items. In addition, slight

changes were made to the original number of anomalous responding items and positive fillers.

One other alteration involved slight modifications to 12 of the original HIT items. These modifications occurred due to the results of the first stage of the pilot study. While the HIT requires only a fourth-grade reading level, it was originally designed for adolescents thus, minor changes were needed to make some of the items more age- and experience-appropriate. Consideration was given to keep the underlying conceptual ideas as similar as possible.

This adapted version of the HIT used in this study contained 53 items in total. Statistical analyses revealed this version of the questionnaire had high internal consistency (alpha = .87). The version used in this study, took approximately 15-25 minutes to complete. Coding and scoring of the data for this study remained consistent with that developed by Gibbs, Barriga, et al. (1996). In other words, there was a 6-point Likert scale that ranges from "disagree strongly" (1.0) to "agree strongly" (6.0). An item score of 1, 2, or 3 indicated non-cognitive distortion, while a score of 4, 5 or 6 indicated the existence of cognitive distortion.

There were 40 statements of attitudes, thoughts, and beliefs that were designed to measure self-serving cognitive distortions. For example, "You have to get even with people who don't show you respect" (Gibbs, Barriga, et al., 1996). The other 13 statements were composed of control items (positive fillers and anomalous responding items). There were nine control items representing positive fillers. These items consisted of prosocial statements such as "People should try to work on their

problems." The statement, "Sometimes I get bored," is an example of one of the four items designed to measure anomalous responding (Gibbs, Barriga, et al., 1996).

Part II of the questionnaire was designed to measure bullying behaviours. Specifically, the focus was on assessing involvement in bullying behaviours. While this questionnaire was developed for the purpose of the present research, it is important to note that both the basic structure and content of the questionnaire were largely based on bullying literature and research. Many bullying researchers have followed a survey approach in which student self-reports were relied upon for insights into bullying (Charach et al., 1995; Mynard & Joseph, 1997; Pepler et al., 1994; Rigby & Slee, 1993; Rivers & Smith, 1994; Salmivalli et al., 1996; Smith & Levan, 1995). As stated previously, student self-reports of bullying are highly valuable as they provide an "insider perspective" to the problem (Pellegrini, 1998). The internal consistency of Part II of the questionnaire was alpha = 0.89.

In regard to the content of the questionnaire, items were constructed based on a four-category typology of bullying. According to Marini, Spear, and Bombay (1999), there are four main categories of bullying: overt - psychological bullying, overt - physical bullying, covert - psychological bullying, and covert - physical bullying.

Part II of the questionnaire was divided into two sections (A and B). Part II of the questionnaire took approximately 15-25 minutes to complete. Sections A and B contained questions which required participants to respond along a 5-point Likert scale. Participants were asked to indicate how often they have experienced or been

involved in certain events during the current school year. The response categories are "never" (1.0), "rarely" (2.0), "sometimes" (3.0), "often" (4.0), or "very often (5.0)." An item score of 1 or 2 indicates non-involvement in bullying problems, while a score of 3, 4, or 5 indicates involvement in bullying problems.

Section A, containing 12 items, was designed to measure victim status. The following question is a sample item from Section A: "How often have other students called you mean or nasty names?". This particular item was designed to measure victim status of overt psychological bullying. Section B was also comprised of 12 items but was designed to measure bully status. For example, "How often have you pushed, hit, or kicked other students?". This item was designed to measure bully status of overt physical bullying. The items in Section A and B aimed to measure whether, and to what extent, a participant was a bully, victim, or not directly involved in each of the four types of bullying. Sections A and B also contained positive fillers. An example of a positive filler from Section A was, "How often have other students helped you when you were hurt?".

Procedures and Data Collection

Once permission was obtained from the Standing Subcommittee on Research with Human Participants, the school board, and each of the principals at the participating schools, a meeting was set up between the researcher and the principal to establish appropriate dates, times, and locations for the administration of the two-part

questionnaire. The consistency of such variables was stressed to the principals in an attempt to minimize possible threats to internal validity.

The actual administration of the questionnaires was conducted by the researcher. The administration took place in a central, vacant location within the school, such as the gymnasium, library, or cafeteria. The questionnaire was administered in group format with up to 25 students at a time. Administration only occurred in the early part of the morning or in the early part of the afternoon to maintain as much consistency as possible.

At the time of the administration, the principal asked the participating students to report to the designated room in order to participate in the study. The researcher waited outside the room to greet the students as they entered. The purpose of this was to help build a rapport and comfort level with the participants. Once all participants were present and seated, the researcher proceeded with a standardized administration procedure for both Part I and Part II (Appendix C). The explicit instructions were created to minimize possible confounding variables which may have arisen during the administration of the questionnaire.

It is important to note that the administration procedure for Part II of the questionnaire contained one additional component. In accordance with much of the research on bullying (Boulton & Smith, 1994; Charach et al., 1995; Olweus, 1993, 1999a; Salmivalli et al., 1996), a definition of bullying was provided to the participants prior to their participation on Part II of the questionnaire. This is very important as it better ensures that the participants have a clear understanding of

the concept of bullying, and thus, are reporting on the phenomenon of bullying, rather than the occurrence of other forms of school conflict (Olweus, 1999a). The construction of the definition of bullying used in this thesis required careful consideration and thought. Definitions used in research must not only be at a conceptual and vocabulary level that is easily understood by the participants, but must also be congruent with the empirical definition (Olweus, 1999a).

Despite the significance of providing a definition of bullying when conducting research, it has also been found that children often do not readily admit to their involvement in bullying behaviours especially when terms such as bully, bullying and victim are used. These words hold a very negative connotation in the minds of many children, and thus, they often do not want to be identified or associated with such terms (Rigby & Slee, 1990; Smith, 1991). In recognition of both of these considerations, a definition of bullying was provided to the participants but the terms bullying, bully, victim and other related words were avoided in the definition, and on the questionnaire.

It was explained to participants that there were items on the questionnaire that refer to behaviours which are both typically encouraged and discouraged at school by teachers and principals. Participants were told that for those behaviours that are typically discouraged at school, they needed to think about a few things before answering how often they have been involved in such events. First, the issue of power imbalance between participants was discussed by telling the participants to report only behaviours in which the person being picked on had a difficult time defending him or

herself. This was discussed in terms of both bully and victim status (without using such terms), by using a sample question from each of the corresponding sections of the questionnaire. Participants were told that difficulty in defending oneself could be due to many reasons, such as being younger, smaller, or alone. Other suggestions were taken from the participants in order to emphasize the issue of power difference between the bully and the victim.

In regard to the issue of repetitiveness, it was believed that since the Likert scale response categories took into account the frequency of the behaviour, there was no need to explicitly express the concept of repetition. The extent of the repetition of the behaviours was revealed in the participants' answers. In order to take into account the issue of intent, the participants were told not to report on behaviours which they thought were accidental, but rather to try and report only on those behaviours which they believed were acted out intentionally or on purpose.

Data Analysis

In order to analyze the quantitative data, various statistical tests were used. The information obtained from this study was not only used to describe the characteristics of the individuals in the study, but also to infer a composite picture of the population from which the participants emerged. Thus, the data were analyzed using both descriptive and inferential statistics. For instance, descriptive analyses such as means, frequencies, and ranges were calculated. In addition, inferential

statistics such as Independent Samples t tests, and Pearson r correlations were also relied upon.

<div align="center">Methodological Assumptions and Limitations</div>

An analysis of the methodology revealed that certain limitations must be acknowledged. For each of the limitations, certain techniques and procedures were employed to minimize and control for the possible effects of the threats.

The first possible threat to internal validity involved subject effects. This threat refers to changes in participants that may have occurred in response to their involvement in the study (McMillan & Schumacher, 1997). Due to the nature of the variables in this research, the self-report questionnaire required participants to reveal beliefs, as well as behaviours that are generally regarded as antisocial. There is a possibility that participants may have wanted to appear positive and "socially desirable" and thus, they may have responded untruthfully. Despite such drawbacks, the benefit of gaining insider perspective was believed to outweigh these limitations.

Nevertheless, techniques were implemented to control for this possible subject effect. First, the term bullying was never utilized, either in the definition or on the questionnaire. In addition, all students were asked to respond as honestly as possible to the items presented in the questionnaire. It was also made clear to the participants that the questionnaires were to be anonymous and that individual answers would be confidential. Finally, the participants were also made aware that there were neither positive nor negative consequences for certain responses.

The second possible threat to validity involved the testing effect. More specifically, because both of the main variables were being measured in the same questionnaire, there was a chance that participants might have been able to figure out the connection between the two variables and thus, determine the basic purpose of the study (McMillan & Schumacher, 1997). This in turn, could have led participants to respond accordingly.

The first step taken to minimize this threat was to administer the questionnaire in two parts, with each of the main variables being measured in a different part. Second, the time lapse between administration of each part was a minimum of 1 day and a maximum of 3 days. Third, additional items were included in the questionnaire. As discussed previously, the original HIT questionnaire was constructed to contain control items such as anomalous responding items and positive fillers. These were included to encourage complete use of the Likert response scale, to screen for suspect responding, and to camouflage the distortion items (Liau et al., 1998). Following the lead of Gibbs, Barriga, et al. (1996), both portions of the questionnaire were designed to contain control items. Part I which measured cognitive distortions, contained nine positive fillers and four anomalous responding items, while, Part II, which measured bullying behaviours, also included eight positive fillers. The items were included to encourage honesty, as their inclusion makes it more difficult for participants to respond in a certain manner simply because they believe it supports the expected outcome of the study.

CHAPTER FOUR: RESULTS

Preliminary Analyses

<u>Profile of the Sample</u>

The sample of this study consisted of 206 elementary school children. As indicated in Table 1, the sample has been divided and initially analyzed in terms of grade, age, and gender to provide a more comprehensive profile of the sample. With respect to grade, four grades were represented in the sample. Grade 5 children made up 33% of the sample, Grade 6 children made up 22% of the sample, Grade 7 children made up 20% of the sample, and Grade 8 students made up 25% of the sample.

In regard to the age of the sample, the sample was divided into five age categories. Ten-year-olds comprised 16% of the sample, 11-year-olds comprised 29% of the sample, 12-year-olds comprised 19% of the sample, 13-years-olds comprised 24% of the sample, and 14-year-olds comprised 13% of the sample.

The last category, gender, revealed that 44% of the total sample consisted of males, while females represented 56% of the total sample.

Table 1

<u>Profile of the Sample</u>

Category	Subcategory	n	%
Grade	5	68	33
	6	45	22
	7	41	20
	8	52	25
Age	10	32	16
	11	58	29
	12	40	19
	13	50	24
	14	26	13
Gender	Male	91	44
	Female	115	56

Range of Responses

Each of the items in Part I and Part II of the questionnaire were analyzed in terms of the range of answers provided, as well as the mean and standard deviation of the answers. For this descriptive analysis of each of the items in Part I and Part II of the questionnaire, refer to Appendix D and Appendix E, respectively.

Percentage by Item

The percentage of participants who selected each of the possible responses provided through Likert scales was also calculated. This analysis was conducted for each item in both Part I (see Appendix F) and Part II of the questionnaire (see Appendix G). In Part I, participants were asked to indicated their level of agreement with a variety of self-serving cognitive distortion items. For example, participants were asked to indicate their level of agreement to the following statement: "I make mistakes because I hang around with the wrong crowd." Remaining consistent with the HIT questionnaire constructed by Gibbs, Barriga, et al. (1996), an item score of 1, 2, or 3 indicated non-cognitive distortion, while a score of 4, 5, or 6 indicated cognitive distortion.

As expected, for each item, a majority of participants expressed some level of disagreement (e.g., a score of 1, 2, or 3). There were only three self-serving cognitive distortion items in which a majority of participants expressed some level of agreement. The first item (#10 on Part I of the questionnaire) represented a Lying, Assuming the Worst cognitive distortion. The second item (#45 on Part I of the questionnaire) represented a Psychological Aggression, Assuming the Worst cognitive

distortion. The third item (#48 on Part I of the questionnaire) represented an Oppositional/Defiance, Blaming Others cognitive distortion.

In addition, calculations were tabulated for percentage by item for Anomalous Responding (AR) in Part I of the questionnaire. As discussed previously, Anomalous Responding items screen for disingenuous, incompetent, or otherwise suspect responding. Analysis revealed that all participants on average agreed at some level to each of the Anomalous Responding items. This is important, as disagreement with anomalous responding items was thought to indicate suspect responding. Following the research of Liau et al. (1998), individual AR mean scores above 4.0 were considered suspect and thus were to be excluded from data analysis. Fortunately in this study, no participant received AR mean scores above 4.0, and thus, no exclusion of data was required.

As indicated previously, an analysis of Part II of the questionnaire was conducted in order to determine the percentage of participants who selected each of the possible Likert scale responses for each questionnaire item (see Appendix G). This scale aimed to assess involvement in bullying others, as well as involvement in victimization. An item score of 1 (never) or 2 (rarely) indicated no involvement in bullying problems, while a score of 3 (sometimes), 4 (often), or 5 (very often) indicated involvement in bullying problems. This classification was made based on the overwhelming theoretical agreement among bullying researchers that bullying is a form of aggression that is repetitive in nature (Olweus, 1999a).

Depending on the particular item from Part II of the questionnaire, involvement in bullying others ranged from 7% to 47%. On the other hand, involvement in victimization ranged from 15% to 73%, depending on the particular questionnaire item

For a more detailed account of percentage by item analysis, refer to Appendix F and Appendix G.

Self-Serving Cognitive Distortions and Bullying Others

In order to assess the relationship between children's self-serving cognitive distortions and bullying others, a Pearson product-moment coefficient was calculated between the total scores of Part I and the total scores of section B from Part II of the questionnaire. The Pearson product-moment coefficient was utilized as both of the variables use continuous scales. In support of H1, it was found that a significant direct relationship existed between children's self-serving cognitive distortions and bullying others. As presented in Figure 2, children's self-serving cognitive distortions were moderately correlated with bullying others ($r = .50$, $p < 0.01$). This correlation of 0.50 accounts for 25% of the common variance, therefore 75% is left unexplained by the correlation.

Further analyses were calculated to examine the impact of the variables of gender and age on the relationship between self-serving cognitive distortions and bullying others. Analyses on female scores only, and then with male scores only, revealed coefficients similar to those which were found in the overall relationship.

Figure 2. Relationship between self-serving cognitive distortions and bullying others.

Both revealed significant direct relationships which were moderate in strength. The analysis, taking into account female scores only, indicated r = .51 (p< 0.01), while the analysis for male scores only indicated an r value of (.44, p<0.01).

When taking into account the variable of age, it was found that there was a significant direct relationship (r = .251, p< 0.01) between self-serving cognitive distortions and bullying others. Yet, due to the fact the strength of the relationship was low, no further analyses into the impact of the variable of age were deemed necessary.

Due to the initial findings of the overall relationship between children's self-serving cognitive distortions and bullying others, analyses were further conducted to determine the correlations between each of the nine subscales of self-serving cognitive distortions and bullying others. The nine subscales were composed of four cognitive distortion subscales and five behavioural referent subscales. These analyses revealed that similar to the overall relationship, significant moderate, direct correlations existed between each of the nine subscales of self-serving cognitive distortions and bullying others. The correlations ranged from a low of r = .34 (p<0.01) for Assuming the Worst cognitive distortions and a high of r = 0.54 (p<0.01) for Self-Centred cognitive distortions. These correlation values have been rated as moderate, based on the classifications made by Fraenkel and Wallen (1990) and McMillan and Schumacher (1997). Table 2 and Table 3 present the specific r values for the correlations between each of the nine subscales of self-serving cognitive distortions and bullying others.

Table 2

The Relationship Between Cognitive Distortion Subscales and Bullying Others

Cognitive Distortion Subscale	Pearson r
1. Self-Centred	.54**
2. Minimizing/Mislabeling	.49**
3. Assuming the Worst	.34**
4. Blaming Others	.42**

** p< 0.01.

Table 3

The Relationship Between Behavioural Referent Subscales and Bullying Others

Behavioural Referent Subscale	Pearson r
1. Psychological Aggression	.44**
2. Physical Aggression	.45**
3. Opposition/Defiance	.48**
4. Lying	.43**
5. Stealing	.36**

** $p < 0.01$.

Self-Serving Cognitive Distortions and Victimization

Correlations were also computed to assess the relationship between children's self-serving cognitive distortions and victimization. It was found that a significant direct relationship existed between the two variables. Despite the significant direct relationship found, it is important to acknowledge that the strength of the relationship was low, as $r = .22$ (p<0.01). This finding is presented in Figure 3. As a result of the low magnitude of the correlation, further analyses were not undertaken to determine the correlations between each of the nine subscales of self-serving cognitive distortions and being victimized.

Analyses were conducted to determine the influence of gender, as well as age on the relationship between self-serving cognitive distortions and being victimized. Analyses calculated with female scores only, and then with male scores only, revealed coefficients similar to those which were found in the overall relationship. Both revealed significant direct relationships which were low in strength. The analysis taking into account female scores only, indicated $r = .29$ (p< 0.01), while the analysis for male scores only, indicated an r value of (.11, p<0.01).

When taking into account the variable of age, it was found that there was no significant relationship ($r = -.01$, p =.88) between self-serving cognitive distortions and being victimized. Such a finding indicated that further analyses into the more specific impact of the variable of age, were inappropriate.

Figure 3. Relationship between self-serving cognitive distortions and victimization.

Percentage of Children Classified as Bullies

Analyses were conducted to determine the prevalence of bullying other children. Specifically, Section B of Part II of the questionnaire was analyzed in order to determine the prevalence of bullying other children. The percentage of participants who could be classified as bullies was determined by analyzing the answers to the eight questions in Section B that aimed to assess bully status. As indicated previously, Section B in Part II of the questionnaire asked participants how often they have been involved in certain events during the school year. The possible response categories were "never" (1.0), "rarely" (2.0), "sometimes" (3.0), "often" (4.0), or "very often (5.0)." An item score of 1 (never) or 2 (rarely) indicated no involvement in bullying other children, while a score of 3 (sometimes), 4 (often), or 5 (very often) indicated involvement in bullying other children.

Since a score of at least 3 on a questionnaire item is necessary to indicate involvement in bullying other children, and there are eight questions addressing bully status, a total score of 24 or higher was used as the general guideline from which to decide whether a participant could be classified as a bully. It is essential to note, that as is the case with all cutoff scores used for classification purposes, future research would be valuable to confirm what are the most appropriate cutoff scores. According to the cutoff guideline used in this study, approximately 7% of participants could be classified as bullies. Refer to Appendix H for a more detailed account of the percentage of bullies.

Gender Differences in Terms of Bullying Others

Independent Sample t tests were performed to learn whether significant differences existed between the means of males and females in regard to bullying other children. These tests were utilized to compare the means of males and females on physical bullying, psychological bullying, overt bullying, and covert bullying. It is important to point out, that for this analysis bullying was examined along the dimensions, not according to type. As noted in Figure 4, it was found that males consistently scored higher means than females on each of the four subscales of bullying. Furthermore, the difference between the means of males and females was significant for each of the subscales. It is important to note that age differences were not investigated in terms of bullying other children. Gender was thought to be a more interesting variable to investigate in this secondary phase of the research study. This decision was made because the participants in this study were from the same general stage of child development, known as early adolescence. According to Santrock (1994), adolescence is the developmental period entered at approximately 10 to 12 years of age and ending at 18 to 22 years of age. Table 4 provides a more complete summary of gender differences in terms of bullying other children.
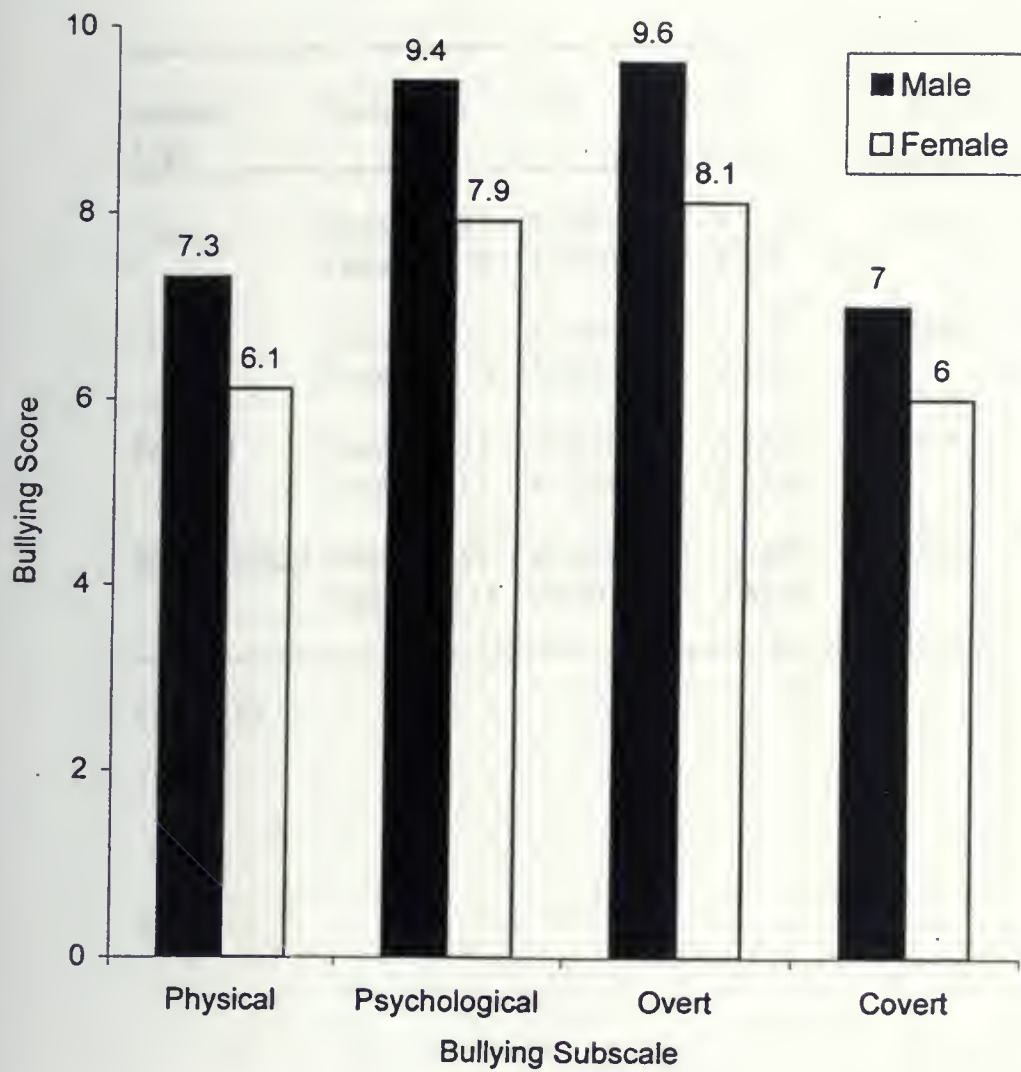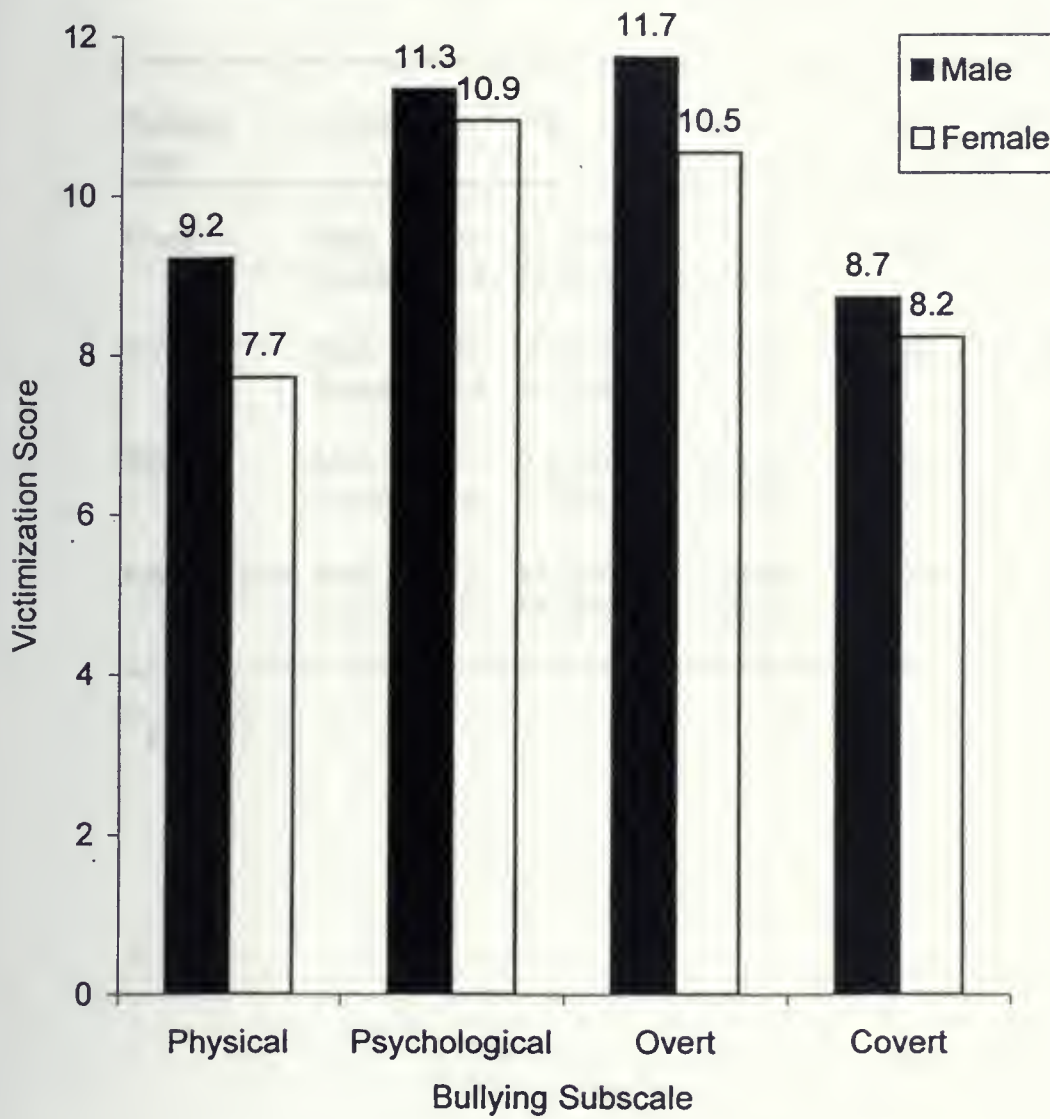
Figure 4. Mean bullying score of male and female participants for each of the four subscales of bullying.

Table 4

Independent Samples t Test for Gender and Bullying

Bullying Type	Group	n	M	SD	df	t	p
Overt	Male	91	9.6484	2.8141	204	3.928*	0.000
	Female	115	8.0870	2.8487			
Covert	Male	91	6.9780	2.2110	204	3.121*	0.002
	Female	115	5.9826	2.3207			
Physical	Male	91	7.2527	2.0634	204	3.591*	0.000
	Female	115	6.1304	2.3490			
Psychological	Male	91	9.3736	2.7594	204	3.662*	0.000
	Female	115	7.9391	2.8169			

* $p < 0.05$.

Percentage of Children Classified as Victims

Analyses were also conducted to determine the prevalence of being victimized in bullying. Section A of Part II of the questionnaire was analyzed in order to determine prevalence of victimization by other children. The percentage of participants who could be classified as victims was determined by analyzing the answers to the eight questions in Section A. Items in Section A asked how often certain events have occurred during the school year. As was the case with bully status, the response categories were "never" (1.0), "rarely" (2.0), "sometimes" (3.0), "often" (4.0), or "very often (5.0)." An item score of 1 (never) or 2 (rarely) indicated no victimization, while a score of 3 (sometimes), 4 (often), or 5 (very often) indicated victimization in bullying.

Since a score of at least 3 on a questionnaire item is required to indicate victimization, and there were eight questions aiming to measure victim status, a total score of 24 or higher was used as the general guideline from which to decide whether a participant could be classified as a victim. Using the cutoff value of 24 or higher, it was determined that approximately 27% of participants were victims of bullying. Appendix I provides a more in-depth analysis of the percentage of victims.

Gender Differences in Terms of Victimization

Independent Sample t tests were conducted to investigate if significant differences existed between males and females with respect to victimization in bullying. Analyses were conducted to compare the means of males and females on

victimization in physical bullying, psychological bullying, overt bullying, and covert

bullying. As shown in Figure 5, males consistently scored higher means than females

in terms of victimization in each of the four subscales. Despite the higher mean scores

for males, the difference between the means of males and females was significant for

only two of the bullying subscales. There were significant differences between the

means of males and females for victimization in physical bullying and victimization in

overt bullying. For the same reason as described above, age differences were not

investigated in terms of victimization in bullying. Refer to Table 5 for a more detailed

account of the gender-related findings.

Figure 5. Mean victimization score of male and female participants for each of the four subscales of bullying.

Table 5

Independent Samples t Test for Gender and Victimization

Bullying Type	Group	n	M	SD	df	t	p
Overt	Male	91	11.7143	3.8160	203	2.371*	0.019
	Female	114	10.5175	3.4002			
Covert	Male	91	8.7253	3.2148	203	1.299	0.196
	Female	114	8.1579	3.0208			
Physical	Male	91	9.1758	3.2680	203	3.331*	0.001
	Female	114	7.7368	2.9088			
Psychological	Male	91	11.2637	3.9689	204	0.690	0.491
	Female	115	10.9043	3.4968			

* $p < 0.05$.

Types of Bullying Among Children

Analyses were conducted to examine the percentage of participants who were involved in specific types (groups) of bullying. In Section B, Part II of the questionnaire, the prevalence of each of the four types (groups) of bullying was assessed in terms of involvement in bullying others. As stated previously, a score of 3 or higher on a question was considered to indicate involvement. Since there were two questions aiming to measure each of the four types of bullying, a combined score of 5 or higher was designated as the cutoff from which to determine involvement in bullying others.

Using frequency tables, it was found that approximately 52% of participants reported involvement in overt - psychological bullying. Approximately 24% reported involvement in overt - physical bullying. Covert - psychological bullying was the third most common (approximately 20%), while the least common form of bullying reported was covert - physical bullying (approximately 10%).

Gender Differences in Terms of Self-Serving Cognitive Distortions

Independent Samples t tests were conducted to examine if significant differences exist between males and females in regard to self-serving cognitive distortions. Analyses were conducted on each of the nine subscales of self-serving cognitive distortions. As noted in Figures 6 and 7, males consistently scored higher means than females on measures of self-serving cognitive distortions. In addition, the difference between the means of males and females was significant for all of the

nine subscales of self-serving cognitive distortions except Lying cognitive distortions.

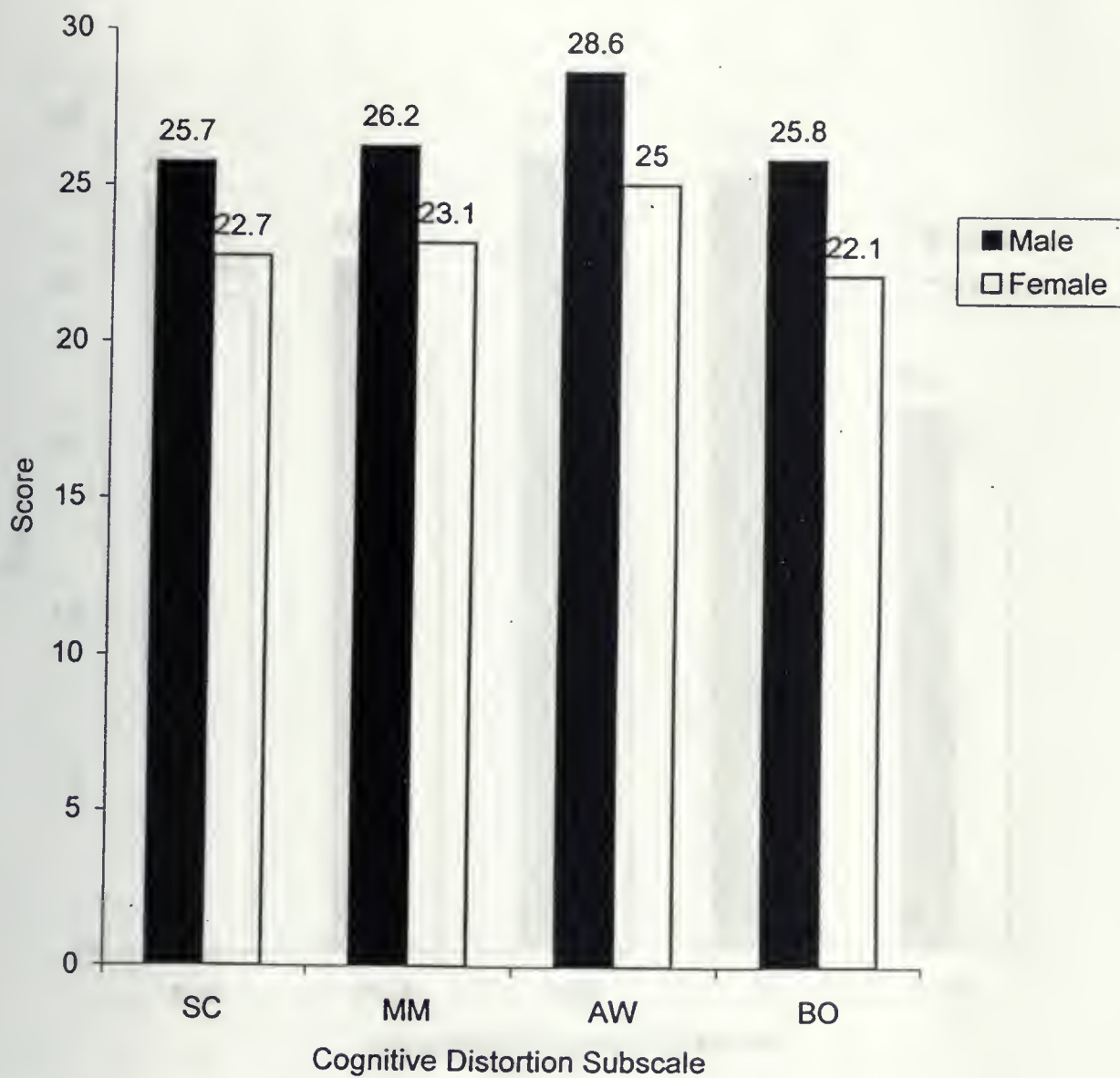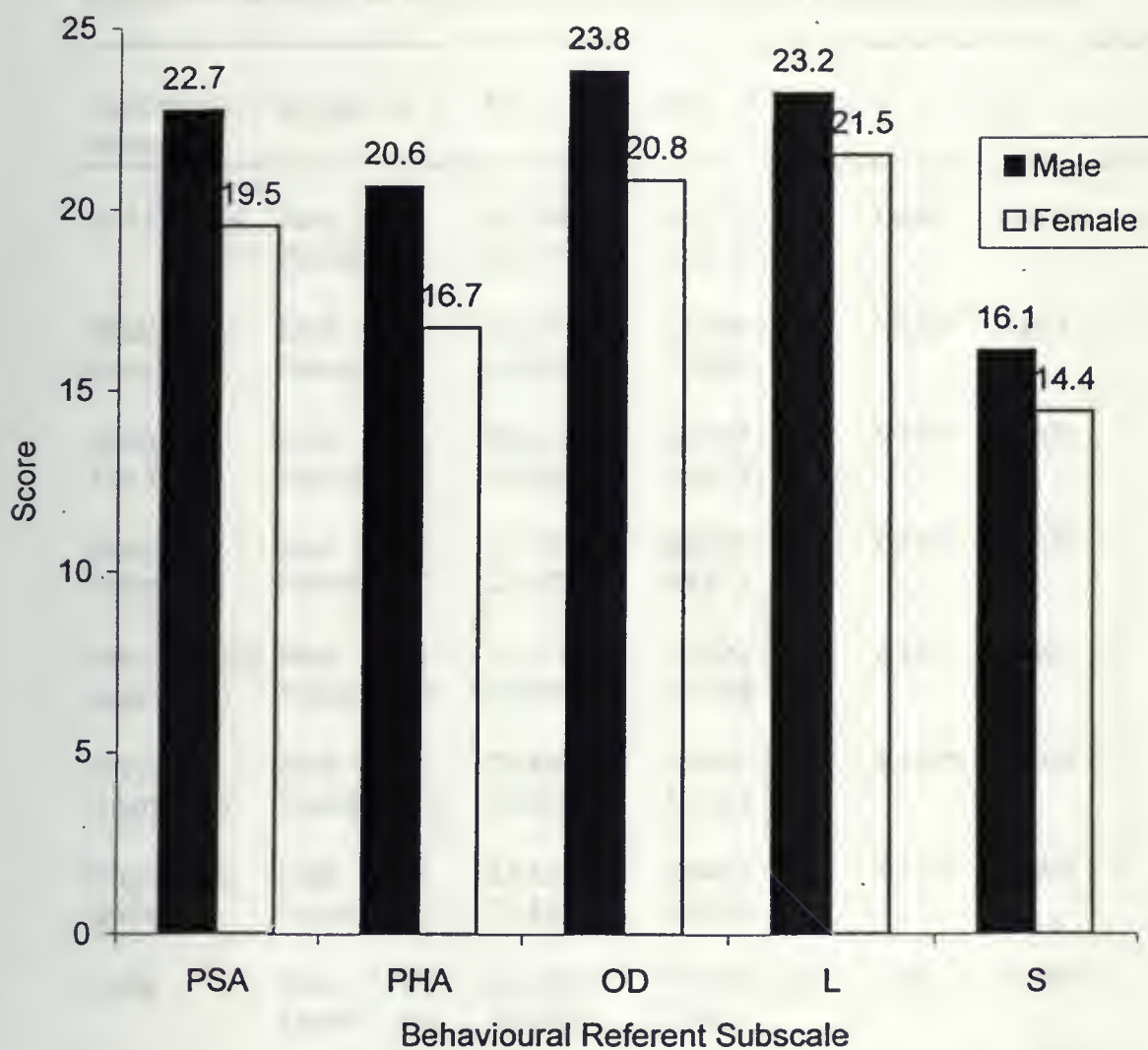For a more detailed account of the findings, refer to Table 6.

Figure 6. Mean score of male and female participants for the Self-Centred (SC),

Minimizing/Mislabeling (MM), Assuming the Worst (AW), and Blaming Others (BO)

cognitive distortion subscales.

Figure 7. Mean score of male and female participants for the Psychological

Aggression (PSA), Physical Aggression (PHA), Opposition/Defiance (OD),

Lying (L), and Stealing (S) behavioural referent subscales.

Table 6

Independent Samples t Test for Gender and Self-Serving Cognitive Distortions

Distortion Subscale	Group	n	M	SD	df	t	p
Self-Centred	Male	91	25.7473	8.6237	203	2.696*	0.008
	Female	114	22.7193	7.4472			
Minimizing/ Mislabeling	Male	91	26.2418	9.6348	200	2.552*	0.011
	Female	111	23.0811	7.9683			
Assuming The Worst	Male	91	28.6154	8.4548	201	3.409*	0.001
	Female	112	25.0446	6.4632			
Blaming Others	Male	91	25.7912	8.0229	202	3.612*	0.000
	Female	113	22.0796	6.6523			
Psychological Aggression	Male	91	22.6703	7.2802	203	3.494*	0.001
	Female	114	19.4912	5.7488			
Physical Aggression	Male	91	20.6044	7.3980	202	4.365*	0.000
	Female	113	16.6814	5.4269			
Opposition/ Defiance	Male	91	23.8352	6.8464	202	3.213*	0.002
	Female	113	20.8142	6.5350			
Lying	Male	91	23.1538	7.7588	203	1.628	0.105
	Female	114	21.4825	6.9157			
Stealing	Male	91	16.1319	6.8398	200	2.049*	0.042
	Female	111	14.3874	5.2573			

* $p < 0.05$

CHAPTER FIVE: DISCUSSION

Summary and Conclusions

This thesis examined the relations between children's social cognition and bullying behaviours. Social cognition is defined as one's thoughts, perceptions, and beliefs regarding social situations (Ingram & Kendall, 1986, as cited in Lochman & Dodge, 1994). One component of social cognition, self-serving cognitive distortion, represents the cognitive focus for this study. Self-serving cognitive distortions are inaccurate and/or rationalizing thoughts and beliefs about one's own or others' social behaviour. Self-serving cognitive distortions are believed to disinhibit aggression and other antisocial acts because they work to protect individuals from developing negative self-concepts and self-blame (Barriga, Landau, Stinson, Liau, & Gibbs, 2000).

Bullying is defined as the repeated and intentional abuse of physical and/or psychological power (Marini, Spear, & Bombay, 1999). This form of peer aggression can result in victims who are severely anxious and in a state of constant fear (Marini, 1996).

Much of the research conducted on bullying among school children has been descriptive. For instance, many studies have described the prevalence, characteristics, and/or consequences of bullying among school children. This research is very significant from a preliminary standpoint, as it has allowed researchers to develop a good understanding of bullying. Yet according to Sutton et al., (1999a), an even more comprehensive understanding of bullying can be made by investigating the underlying mechanisms and factors that may be involved in the development and maintenance of

bullying behaviours. This study specifically examines the social cognitive mechanism of self-serving cognitive distortions.

Theory and research support the notion that social cognition is a mediating factor in the development and maintenance of aggressive behaviour (Baron & Richardson, 1994; Coie & Dodge, 1998; Dodge & Crick, 1990). Social information-processing theory has represented the theoretical framework of numerous studies. The theory postulates that social cognitive deficits and/or distortions are significant factors in the development and maintenance of aggressive behaviour (Coie & Dodge, 1998). Many of these studies have shown support for the thesis of the social information-processing theory. More specifically, researchers have found that children who are aggressive possess social-cognitive processes that are deficient and/or distorted in some manner (Coie & Dodge, 1998).

While research on general aggression has provided a basic understanding of the social cognitive processes of aggressive children, there is a great need to explore how social cognition is related to specific forms of childhood aggression, such as bullying. Crick and Dodge (1999) and Sutton et al.(1999a) emphasize the necessity of conducting research with children who engage in specific forms of aggression in order to develop an understanding of the social cognitive processes related to those specific types of aggression. Interestingly, from the limited amount of research which has been conducted on the social cognitive processes of children who bully, theoretical debates and conflicting empirical findings have already begun to emerge

concerning the social cognition of bullies (Crick & Dodge, 1999; Slee, 1993; Sutton et al., 1999a, 1999b, 1990c).

The main objective of this study was to examine the relations between children's self-serving cognitive distortions and involvement in bullying behaviours. Developing a preliminary understanding of this relationship has theoretical and empirical importance. From a practical standpoint, it represents an important step towards the creation of anti-bullying programs which meet the cognitive needs of the children involved bully/victim problems.

This research was quantitative, correlational, and cross-sectional in nature. To answer the research questions, self-report questionnaire methodology was relied upon. The general question underlying this thesis, was as follows: What is the relationship between self-serving cognitive distortions and involvement in bullying behaviours (as bully or victim)?

Due to the fact that the main focus of this study was the aggressor in the bully-victim problem, the central question of this thesis was as follows:
Q1. What is the relationship between children's self-serving cognitive distortions and bullying others?

Despite this focus on the aggressor, the following question was also of interest:
Q2. What is the relationship between children's self-serving cognitive distortions and victimization?

The questions have also been analyzed in terms of gender and age differences.

In answering these main questions, as well as secondary questions, this thesis has made a contribution toward the understanding of social cognition and bullying behaviours. Prior research on general childhood aggression has found that certain social cognitive patterns can predict aggression. Despite this, the role that social cognition specifically plays in the development and maintenance of bullying behaviours has largely been unexplored (Rigby, 1997; Sutton, Smith, & Swettenham, 1999a). Thus, this preliminary study aims to fill a gap in the existing social cognitive and bullying literature.

Participants of the study included 206 elementary school children from South Western Ontario. Children from Grades 5, 6, 7, and 8 agreed to participate. In addition, both males and females participated. Participants completed a two-part self-report questionnaire within a 1-week time frame. Part I aimed to measure self-serving cognitive distortions, while Part II was designed to measure bullying behaviours.

After all participants completed the questionnaires, the answers from Part I and Part II of the questionnaires were then analyzed. Preliminary analyses involved profiling the sample in terms of grade, age, and gender. Preliminary analyses also included examining the range of answers provided and determining the percentage of participants who selected each of the possible responses. The main analysis involved exploring the relationship between the two variables (self-serving cognitive distortions and bullying behaviours). Analyses were also conducted to determine the percentage of children who were involved in bully-victim problems; gender differences with respect to bullying others, victimization, and self-serving cognitive distortions;

and the prevalence of each of the subgroups (types) of bullying.

Despite the fact that the central focus of this research was to examine the strength and direction of the relationship between the two variables, self-serving cognitive distortions are also discussed in terms of the role they may play in bullying behaviour. The role self-serving cognitive distortions may play in such behaviour is discussed due to the theoretical agreement among researchers as to the mediating effects of cognition on behaviour and the actual empirical evidence which greatly supports the mediating effect of cognitive processes on social behaviours (Huesmann, 1998). Furthermore, numerous studies which have investigated cognition and aggressive behaviour, relying on similar methodologies to this thesis, have made general conclusions regarding the contributory role cognitions play in the development and maintenance of this behaviour (see Craig et al., 1998; see Liau et al., 1998). Although a correlational relationship between variables does not reveal a causal connection, correlational research is often used to gain some insight into cause and effect (McMillan & Schumacher, 1997).

When the data to answer Q1 were analyzed, it appears that social cognition and more specifically, self-serving cognitive distortions, are linked to bullying others. A significant direct moderate correlation ($r = .50$, $p<0.01$) was found for the relationship between children's self-serving cognitive distortions and bullying others. This correlation remained consistent when male and female scores were analyzed independently, indicating that regardless of gender, the relationship remained. When the variable of age was introduced, it was found that an age trend was not present in

relation to the two variables. In other words, the relationship between the two variables does not follow an age trend. Similar to the overall relationship, a significant direct moderate correlation was also found for the relationship between each of the nine subscales of self-serving cognitive distortions and bullying others. The nine subscales of self-serving cognitive distortions are composed of four cognitive distortion subscales and five behavioural referent subscales. Such findings generally indicate that children's self-serving cognitive distortions are related to bullying others.

Correlations were also computed to answer Q2. In this case, the goal was to measure the relationship between children's self-serving cognitive distortions and victimization. While a significant direct relationship existed between the two variables, the strength of the relationship was low ($r = .22$, $p<0.01$). Thus, it can suggested that self-serving cognitive distortions may not appear to be linked to victimization.

Analyses conducted to determine the influence of gender on the relationship between the two main variables, indicated coefficients similar to those which were found in the overall relationship. This revealed that neither males' or females' self-serving cognitive distortions are linked to victimization. When taking into account the variable of age, it was found that there was a very low, nonsignificant indirect relationship between self-serving cognitive distortions and victimization. Therefore, there does not appear to be an age trend in terms of the relationship.

In addition to the two main questions, there were also secondary questions which were of interest. For instance, data were analyzed to assess the prevalence of bully-victim problems. In this sample, 7% of participants can be classified as bullies while 27% of participants can be classified as victims of bullying. These prevalence rates are somewhat higher than those found in the research from the National Longitudinal Study of Children and Youth (NLSCY). The study revealed that approximately 20% of Canadian school children are involved in bullying, as either a bully or a victim (Craig et al., 1998, p. iii). It is essential to note that the NLSCY was conducted with children between 4 and 11 years old, and participants in this thesis were between 10 and 14 years old. Thus, it is possible that the difference in the age of the sample could account for the different rates of bullying. While this may be the case, the developmental trends in bullying research would suggest otherwise. It has generally been found that as children become older, there is a decrease in the number of reports on being bullied (Charach et al., 1995; Kumpulainen et al., 1999; O'Connell et al., 1997; Rigby, 1997).

Analyses were also performed to learn whether significant differences existed between the means of males and females with respect to bullying others, as well as being victimized. In terms of bullying others, males consistently scored significantly higher means than females on each of the four categories of bullying used for analysis. With respect to victimization, males also consistently scored higher means than females. Yet, despite the higher mean scores for males in terms of victimization, the difference between the means of males and females was significant for only two of the

categories. Significant differences were found between the means of males and females for victimization in physical bullying and victimization in overt bullying. These results largely support the majority of bullying research which has found that a higher percentage of boys compared to girls are involved in bullying others (Craig et al., 1998; Kumpulainen, et al., 1999; Olweus, 1983, as cited in Olweus, 1999a; Rigby, 1997).

Additional analyses were conducted with the bullying data to find out which subgroup (type) of bullying was most common among the sample. Overt bullying was found to be more common than covert bullying. Overt - psychological bullying was found to be the most common. The second most common was overt - physical bullying. Covert - psychological bullying was the third most common, while the least common form of bullying reported was covert - physical bullying. These findings are consistent with much of the research on bullying (Marini, Spear, & Bombay, 1999). Overt bullying which involves direct and open attacks on victims has largely been found to be more common that covert bullying which involves indirect and secretive attacks on victims.

Another secondary area of interest revolved around the issue of whether there are significant differences between males and females in regard to self-serving cognitive distortions. Analyses compared males and females on each of the nine subscales of self-serving cognitive distortions. Interestingly, males consistently scored higher means than females on measures of self-serving cognitive distortions. Furthermore, the difference between the means of males and females was

significant for all of the nine subscales of self-serving cognitive distortions except the behavioural referent subscale, Lying cognitive distortions.

Despite these gender findings, caution must be used when interpreting these data. While conclusions could be drawn that males bully more than females and that males possess greater self-serving cognitive distortions than females, it may be the case that males were simply more truthful when answering the questions on cognitive distortions. Societal influences may send the message to children that it is more acceptable for males than females to have deviant thoughts and beliefs (Santrock, 1994).

<div align="center">Implications</div>

<u>Implications for Theory</u>

Social cognition is considered to be one's thoughts regarding social situations. Social cognition is made up of information-processing steps and latent cognitive schema. These two social cognitive processes are believed to work together to produce behaviour (Ingram & Kendall, 1986, as cited in Lochman & Dodge, 1994). According to general social cognitive theory, aggression should not be seen as inevitable, but as a behaviour that is dependent upon information-processing patterns and general schemas (Coie & Dodge, 1998; Dodge & Crick, 1990).

Social information-processing theory, which is a branch of general social cognitive theory, has been used as the theoretical basis for much of the research on aggressive children's social cognition (Coie & Dodge, 1998). The thesis of this theory

is that social cognitive deficits and/or distortions are significant factors in accounting for aggression. In other words, aggressive children have been found to have numerous deficient and/or distorted social cognitive processes. These deficient and/or distorted social cognitive processes are believed to increase the probability that children will act in aggressive ways (Coie & Dodge, 1998; Crick & Dodge, 1994, 1996; Crick & Werner, 1998; Dodge et al., 1990).

In accordance with much of the research on social cognition and general childhood aggression, this thesis was approached from a social information-processing basis. In other words, in H1, it was predicted that there would be a direct relationship between self-serving cognitive distortions and bullying others. As discussed previously, research on social cognition and bullying behaviours has just recently begun. Therefore, at this point in time, a preliminary understanding is still being formed regarding the role that social cognition plays in the development and maintenance of bullying behaviours (Rigby, 1997; Sutton et al., 1999a). Since bullying is a form of aggression, the research findings on general childhood aggression were seen as a starting point from which to theorize this study.

The results of this study are generally consistent with the thesis of social information-processing theory. In this thesis, a significant moderate, direct relationship was found between children's self-serving cognitive distortions and bullying others. Similar to this overall relationship, significant moderate, direct correlations were also evidenced between each of the nine subscales of self-serving cognitive distortions and bullying other children.

The results of the correlation between children's self-serving cognitive distortions and being victimized, were also generally consistent with childhood aggression theories. Although a significant direct relationship existed between the two variables, the strength of the relationship was low. According to childhood aggression theories, self-serving cognitive distortions are related to externalizing behaviours, and thus, it was not anticipated that being victimized in bullying would relate to self-serving cognitive distortions. While there was a significant direct relationship, its low strength makes the significance and directness of the relationship have little consequence.

It is essential to note that even though this research does not reveal any relationships which are high in strength, the moderate relationships found in this thesis are still useful for contributing to a preliminary understanding of the possible social cognition of bullies. According to McMillan and Schumacher (1997), in studies where the main goal is to investigate relationships, correlations as low as .30 or .40 are valuable. These findings lend general support to the thesis of social information processing theory, as they indicate there is a moderate correlation between cognitive distortions and bullying others.

Thus, in regard to the theoretical debate on the social cognition of bullies described earlier, the findings of this thesis lend some support to the thoughts and theorizing of Crick and Dodge (1999). Social information processing theory states that cognitive distortions are important factors in accounting for aggressive behaviour.

Implications for Practice

The findings of this study are of practical importance for educators and curriculum planners. Both the description of the extent and nature of bullying and the relationship investigated between children's self-serving cognitive distortions and bullying behaviours have practical value. In terms of the descriptive data, the finding that approximately 7% of participants could be classified as bullies while 27% of participants could be classified as victims, reiterates the need for schools to implement anti-bullying programs. Other results concerning gender similarities and differences, as well as the prevalence of each of the subgroups of bullying, should be taken into consideration during the construction of such anti-bullying programs. For instance, in this study it was found that overt bullying was the most commonly reported form of bullying. Overt - psychological bullying was the most common at 52%, followed by overt - physical bullying at 24%. Such information is important as it highlights that bullying can occur in the form of psychological aggression, as well as physical aggression. These results indicate the necessity of providing educators, parents, and students with a comprehensive understanding of what actually constitutes bullying behaviour.

The main focus of this research is to investigate the relationship between self-serving cognitive distortions and bullying behaviours. As discussed previously, research which explores social cognition and bullying behaviour has only recently begun. Thus, while the results of this study hold practical significance, future research

should be carried out to further explore the link between self-serving cognitive distortions and bullying behaviours. According to Fraenkel and Wallen (1990), correlations that are moderate in strength have general practical value. Therefore, many of the relationships investigated in this thesis should be taken into consideration during the creation of anti-bullying programs. For instance, the significant moderate direct relationship found between self-serving cognitive distortions and bullying other children, as well as the significant moderate direct relationship found between each of the nine subscales of self-serving cognitive distortions and bullying other children both appear to reaffirm the need for developing interventions that aim to reduce and prevent cognitive distortions in children.

The findings of this study and future studies can be put to use in the development of anti-bullying programs, which aim to meet the needs of the individual child involved. Clearly, one of the key goals of anti-bullying programs should be to reduce and prevent those cognitions that support bullying behaviours. The results of studies such as this one, can help educators and curriculum planners better understand and ultimately remove the problem of bullying which is so pervasive in many of our schools.

Implications for Further Research

The findings of this study clearly open the door for a variety of future research endeavours. As a result of this preliminary research on the relationship between children's self-serving cognitive distortions and bullying behaviours, many new questions can and should be addressed. Future research endeavours focusing on self-

serving cognitive distortions and bullying behaviours are important as they will provide additional, and indeed, deeper research into the topic.

In this thesis, two main threats to internal validity have been identified as limitations to the research. Although the threats have been minimized due to the use of certain procedures within this study, future research may avoid such threats by using alternative measurement techniques. The first threat to internal validity in this study involved subject effects. In order to measure children's involvement in bullying behaviours, self-report questionnaires were used. When using self-report measures, there is a risk that participants may respond untruthfully due to a need to appear positive and "socially desirable". The testing effect, was identified as the second possible threat to internal validity. Since both of the main variables were being measured in the same questionnaire, there is the possibility that participants may be able to determine the link between the two variables of study and thus, answer accordingly.

It is important to note that due to the internal nature of the variable, self-serving cognitive distortions, the use of self-report methodologies seems necessary. Despite this, threats to internal validity may be overcome by using different techniques to measure involvement in bullying behaviours.

As discussed previously, Pepler and her colleagues support the use of naturalistic observation for the assessment of bullying. They believe this methodological approach can provide greater accuracy and a more thorough assessment of the occurrence of bullying at school (Atlas & Pepler, 1998; Craig,

Pepler, & Atlas, 2000; Pepler & Craig; 1995; Pepler et al., 1998). Another alternative

approach to the measurement of bullying, involves triangulation. Triangulation

involves the cross-checking of data. This is possible through the use of multiple data

sources or multiple data collection procedures (Fraenkel & Wallen, 1990). While this

technique is often associated with qualitative research, it is also used in quantitative

research. In the case of bullying research, triangulation could be used by gathering

peer nominations, teacher reports, and self-reports on involvement in bullying

behaviours.

Many more studies can be conducted to further the understanding of self-

serving cognitive distortions and bullying. Future research endeavours would likely

provide a more comprehensive picture of self-serving cognitive distortions and

bullying behaviours. First, while this thesis used continuous measures of bullying

involvement to test for correlations between children's self-serving cognitive

distortions and bullying behaviours, future research could use categorical measures of

participant roles (e.g., bully, victim, bully/victim, not involved) to compare group

means in self-serving cognitive distortions. In other words, the focus would be on

investigating whether significant differences exist between participant roles in terms

of self-serving cognitive distortions.

Second, future research could focus on discriminating among different types of

bullies and victims with respect to self-serving cognitive distortions. Bullying

research has already made a distinction between active and passive bullies, and

active and passive victims (Olweus, 1999b). Therefore, research could investigate whether there are differences in terms of active and passive status in terms of self-serving cognitive distortions. It may be that active versus passive status makes a difference with respect to possessing self-serving cognitive distortions.

Another future research focus could be examining self-serving cognitive distortions in relation to subgroups of bullying. Following Marini, Spear, and Bombay's (1999) classification, there are four types (subgroups) of bullying. They have been identified as: overt - physical, overt - psychological, covert - physical, and covert - psychological. Could it be that children engaged in certain types of bullying are more likely to possess self-serving cognitive distortions?

A fourth focus for future research could be an investigation of the specificity of the cognition-behaviour relationship. More specifically, the research could focus on whether certain types of self-serving cognitive distortions would relate to involvement in certain types of bullying. Would Physical Aggression self-serving cognitive distortions be specifically related to physical bullying? Would self-serving cognitive distortions regarding Psychological Aggression be specifically related to psychological bullying?

A fifth future research concern involves investigating in more detail one of the nine subscales of self-serving cognitive distortions. The relationship between Self-Centred cognitive distortions and bullying other children was stronger than the relationship that was found between the overall self-serving cognitive distortion score and bullying other children. Self-Centred cognitive distortion is a primary self-serving

cognitive distortion, which involves egocentric bias. A statement which reveals a Self-Centred cognitive distortion is, "When I get mad, I don't care who gets hurt" (Gibbs, Barriga, et al., 1996, p. 3). Individuals who possess this type of cognitive distortion often view any resistance to their wants or wishes as extremely unfair. It is important to investigate in greater detail whether this type of self-serving cognitive distortion may play more of a role in bullying than the other eight subscales of self-serving cognitive distortions.

Clearly, since this thesis was exploratory in terms of assessing self-serving cognitive distortions and their relationship to bully behaviours, there is a great need for future research to be conducted. The findings of this research should be seen as a starting point from which to develop future research. Further research should investigate additional issues and delve into the research variables in a more penetrating manner.

References

Atlas, R., & Pepler, D. J. (1998). Observations of bullying in the classroom. The Journal of Educational Research, 92 (2), 86-99.

Bandura, A. (1973). A social learning theory analysis. New York: Prentice-Hall.

Baron, R. A., & Richardson, D. R. (1994). Human aggression (2nd ed.). New York: Plenum Press.

Barriga, A. Q., & Gibbs, J. C. (1996). Measuring cognitive distortion in antisocial youth: Development and preliminary validation of the "How I Think" questionnaire. Aggressive Behavior, 22, 333-343.

Barriga, A. Q., Landau, J. R., Stinson, B. L., Liau, A. K., & Gibbs, J. C. (2000). Cognitive distortion and problem behaviors in adolescents. Criminal Justice and Behavior, 27 (1), 36-56.

Barriga, A. Q., Liau, A. K., & Gibbs, J. C. (1998, August). Self-serving cognitive distortion: A psychometric development and validation of the "How I Think" (HIT) questionnaire. Paper presented at the Annual Meeting of the American Psychological Association, San Francisco, CA.

Berkowitz, L. (1993). Aggression: Its causes, consequences, and control. New York: Academic Press.

Bombay, K., & Marini, Z. (2001, April). Social cognitive aspects of peer aggression and victimization. Paper presented at the SRCD Biennial Meeting, Minneapolis, MN.

Boulton, M. J., & Smith, P. K. (1994). Bully-victim problems in middle school children: Stability, self-perceived competence, peer perceptions and peer acceptance. British Journal of Developmental Psychology, 12, 315-329.

Boulton, M. J., & Underwood, K. (1992). Bully-victim problems among middle school children. British Journal of Educational Psychology, 62, 73-87.

Charach, A., Pepler, D., & Zeigler, S. (1995). Bullying at school: A Canadian perspective. Education Canada, 2, 12-18.

Coie, J. D., & Dodge, K. A. (1998). Aggression and antisocial behavior. In W. Damon (Series Ed.) & N. Eisenberg (Vol. Ed.), Handbook of child psychology: Vol. 3. Social, emotional, and personality development (5th ed., pp. 779-862). New York: John Wiley & Sons.

Coie, J. D., Dodge, K. A., Terry, R., & Wright, V. (1991). The role of aggression in peer relations: An analysis of aggression episodes in boys' play groups. Child Development, 62, 812-826.

Connell, A., & Farrington, D. P. (1996). Bullying among incarcerated young offenders: Developing an interview schedule and some preliminary results. Journal of Adolescence, 19, 75-93.

Craig, W. M., Pepler, D., & Atlas, R. (2000). Observations of bullying in the playground and in the classroom. School Psychology International, 2 (1), 22-36.

Craig, W. M., Peters, R. D., & Konarski, R. (1998). Bullying and victimization among Canadian school children (W-98-28E). Ottawa, ON: Human Resources Development Canada.

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. Psychological Bulletin, 115, 74-101.

Crick, N. R., & Dodge, K. A. (1996). Social information-processing mechanisms in reactive and proactive aggression. Child Development, 67, 993-1002.

Crick, N. R., & Dodge, K. A. (1999). 'Superiority' is in the eye of the beholder: A comment on Sutton, Smith, and Swettenham. Social Development, 8 (1), 128-131.

Crick, N. R., & Werner, N. E. (1998). Response decision processes in relational and overt aggression. Child Development, 69 (6), 1630-1639.

Dodge, K. A., Bates, J. E., & Pettit, G. S. (1990). Mechanisms in the cycle of violence. Science, 250, 1678-1683.

Dodge, K. A., & Coie, J. D. (1987). Social information-processing factors in reactive and proactive aggression in children's peer groups. Journal of Personality and Social Psychology, 53 (6), 1146-1158.

Dodge, K. A., & Crick, N. R. (1990). Social information-processing bases of aggressive behavior in children. Personality and Social Psychology Bulletin, 16 (1), 8-22.

Dodge, K. A., Harnish, J. D., Lochman, J. E., Bates, J. E., & Pettit, G. S. (1997). Reactive and proactive aggression in school children and psychiatrically impaired chronically assaultive youth. Journal of Abnormal Psychology, 106 (1), 37-51.

Dodge, K. A., Pettit, G. S., McClaskey, C. L., & Brown, M. (1986). Social competence in children. Monographs of the Society for Research in Child Development, 44 (2), 213-222.

Dollard, J., Doob, C. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). Frustration and aggression. New Haven, CT: Yale University Press.

Egan, S. K., Monson, T. C., & Perry, D. G. (1998). Social-cognitive influences on change in aggression over time. Developmental Psychology, 34 (5), 996-1006.

Farrington, D. P. (1993). Understanding and preventing bullying. In M. Tonry (Ed.), Crime and justice: Vol. 17. A review of research (pp. 348-458). Chicago, IL: University of Chicago Press.

Farrington, D. P. (1994). Childhood, adolescent, and adult features of violent males. In L.R. Huesmann (Ed.), Aggressive behavior: Current perspectives (pp.215 -240). New York: Plenum Press.

Fraenkel, J. R., & Wallen, N. E. (1990). How to design and evaluate research in education. New York: McGraw-Hill.

Gibbs, J. C., Barriga, A. Q., & Potter, G. (1996). The "How I Think" questionnaire. Unpublished manuscript, The Ohio State University, Columbus, OH.

Gibbs, J.C., & Potter, G. (1992). A typology of criminogenic cognitive distortions. Unpublished manuscript, The Ohio State University, Columbus, OH.

Gibbs, J. C., Potter, G. B., Barriga, A. Q., & Liau, A. K. (1996). Developing the helping skills and prosocial motivation of aggressive adolescents in peer group

Griffiths, C. (1995, September). Battler, helper or strategist...School psychologists' responses to bullying and violence in schools. Paper presented at the Annual Meeting of the Australian Guidance and Counselling Association, Hobart, Tasmania.

Huesmann, L. R. (1998). The role of social information processing and cognitive schema in the acquisition and maintenance of habitual aggressive behavior. In R. G. Geen & E. Donnerstein (Eds.), Human aggression: Theories, research, and implications for social policy (pp. 73-109). San Diego, CA: Academic Press.

Kumpulainen, K., Rasanen, E., & Henttonen, I. (1999). Children involved in bullying: Psychological disturbance and the persistence of the involvement. Child Abuse and Neglect, 23 (12), 1253-1262.

Liau, A. K., Barriga, A. Q., & Gibbs, J. C. (1998). Relations between self-serving cognitive distortions and overt vs. covert antisocial behavior in adolescents. Aggressive Behavior, 24, 335-346.

Lochman, J. E., & Dodge, K. A. (1994). Social cognitive processes of severely violent, moderately aggressive, and nonaggressive boys. Journal of Consulting and Clinical Psychology, 62 (2), 366-374.

Loeber, R., & Hay, D. (1997). Key issues in the development of aggression and violence from childhood to early adulthood. Annual Review of Psychology, 48, 371-410.

Marini, Z. A. (1996). Helping students understand and manage school bullying: Changing attitudes and approaches. Niagara Parent Quarterly, 4, 3-7.

Marini, Z. A. (1997, November). Bullying: Children abusing children. Keynote presentation to the 7th Annual What's Out There? Workshop. Organized by The Interprofessional Committee on Child Abuse, Niagara-on-the-Lake, Ontario.

Marini, Z. A. & Auld-Cameron, J. (1991). Understanding conflicts in troubled and non-troubled high school students. Exceptionality Education Canada, 1, 103-124.

Marini, Z. A., Cooper, L. J., Ostaniewicz, A., & Feldman, D. (1999, April). Perceived victimization and school aggression: Cognitive and behavioral changes following an alternative to suspension program. Paper presented at the Society for Research in Child Development Biennial Meeting, Albuquerque, New Mexico.

Marini, Z. A., Spear, S., & Bombay, K. (1999). Peer victimization in middle childhood: Characteristics, causes, and consequences of school bullying. Brock Education, 9 (1), 32-47.

McMillan, J. H., & Schumacher, S. (1997). Research in education: A conceptual introduction. New York: Longman.

Morita, Y., Soeda, H., Soeda, K., & Taki, M. (1999). Japan. In P. K. Smith, Y. Morita, J. Junger-Tas, D. Olweus, R. Catalon, & P. Slee (Eds.), The nature of school bullying: A cross national perspective (pp. 309-323). London: Routledge.

Mynard, H., & Joseph, S. (1997). Bully/victim problems and their association with Eysenck's personality dimensions in 8 to 13 year-olds. British Journal of Educational Psychology, 67, 51-54.

O'Connell, P., Sedighdeilami, F., Pepler, D. J., Craig, W., Connolly, J., Atlas, R., Smith, C., & Charach, A. (1997). Prevalence of bullying and victimization among Canadian elementary and middle school children. (Research Report). (ERIC Document Reproduction Service No. ED 427 834)

Olweus, D. (1993). Bullying at school: What we know and what we can do. Oxford, UK: Blackwell.

Olweus, D. (1994). Bullying at school: Long term outcomes for the victims and an effective school-based intervention program. In L. R. Huesmann (Ed.), Aggressive behavior: Current perspectives (pp. 97-130). New York: Plenum Press.

Olweus, D. (1999a). Norway. In P. K. Smith, Y. Morita, J. Junger-Tas, D. Olweus, R. Catalon, & P. Slee (Eds.), The nature of school bullying: A cross national perspective (pp. 28-48). London: Routledge.

Olweus, D. (1999b). Sweden. In P. K. Smith, Y. Morita, J. Junger-Tas, D. Olweus, R. Catalon, & P. Slee (Eds.), The nature of school bullying: A cross national perspective (pp. 7-27). London: Routledge.

Pellegrini, A. D. (1998). Bullies and victims in school. A review and call for research. Journal of Applied Developmental Psychology, 19 (2), 165-176.

Pepler, D., & Craig, W. M. (1995). A peek behind the fence: Naturalistic observations of aggressive children with remote audiovisual recording. Developmental Psychology, 31, 548-553.

Pepler, D., Craig, W. M., & O'Connell, P. (1999). Understanding bullying from a dynamic systems perspective. In A. Slater & D. Muir (Eds.), The Blackwell reader in developmental psychology (pp. 440-451). Oxford, UK: Blackwell Publishers.

Pepler, D., Craig, W. M., & Roberts, W. L. (1998). Observations of aggressive and nonaggressive children on the school playground. Merrill-Palmer Quarterly, 44 (1), 55-76.

Pepler, D., Craig, W. M., Zeigler, S., & Charach, A. (1994). An evaluation of anti-bullying intervention in Toronto schools. Canadian Journal of Community Mental Health, 13 (2), 95-110.

Price, J. M., & Dodge, K. A. (1989). Reactive and proactive aggression in childhood: Relations to peer status and social context dimensions. Journal of Abnormal Child Psychology, 17, 455-471.

Randall, P. (1996). A community approach to bullying. Stoke on Trent: Trentham Books.

Renfrew, J. W. (1997). Aggression and its causes: A biopsychological approach. New York: Oxford University Press.

Rigby, K. (1996). Bullying in Australian schools – and what to do about it. Melbourne:ACER.

Rigby, K. (1997). Attitudes and beliefs of Australian schoolchildren regarding bullying in schools. Irish Journal of Psychology, 18, 202-220.

Rigby, K., & Slee, P. T. (1990). Victims and bullies in school communities. Journal of the Australasian Society of Victimology, 1, 23-28.

Rigby, K., & Slee, P. T. (1992). Bullying among Australian school children: Reported behaviour and attitudes toward victims. The Journal of Social Psychology, 131 (5), 615-627.

Rigby, K., & Slee, P. T. (1993). Dimensions of interpersonal relations among Australian children and implications for psychological well-being. The Journal of Social Psychology, 133 (1), 33-42.

Rigby, K., & Slee, P. T. (1999). Australia. In P. K. Smith, Y. Morita, J. Junger-Tas, D. Olweus, R. Catalon, & P. Slee (Eds.), The nature of school bullying: A cross national perspective (pp. 324-339). London: Routledge.

Rivers, I., & Smith, P. K. (1994). Types of bullying behaviour and their correlates. Aggressive Behaviour, 20, 359-368.

Salmivalli, C., Lagerspetz, K., Bjorkqvist, K., Osterman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. Aggressive Behavior, 22, 1-15.

Santrock, J.W. (1994). Child Development (6th ed.). Madison, WI: Brown & Benchmark.

Schwartz, D., Dodge, K. A., & Coie, J. D. (1993). The emergence of chronic peer victimization in boys' play groups. Child Development, 64, 1755-1772.

Schwartz, D., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1997). The early socialization of aggressive victims of bullying. Child Development, 68 (4), 665-675.

Slee, P. T. (1993). Bullying: A preliminary investigation of its nature and the effects of social cognition. Early Child Development and Care, 87, 47-57.

Slee, P. T., & Rigby, K. (1993). The relationship of Eysenck's personality factors and self-esteem to bully/victim behaviour in Australian school boys. Personality and Individual Differences, 14, 371-373.

Smith, P. K. (1991). The silent nightmare: Bullying and victimization in school peer groups. The Psychologist, 14, 243-248.

Smith, P. K., & Levan, S. (1995). Perceptions and experiences of bullying in younger pupils. British Journal of Educational Psychology, 65, 489-500.

Smith, P. K., & Morita, Y. (1999). Introduction. In P. K. Smith, Y. Morita, J. Junger-Tas, D. Olweus, R. Catalon, & P. Slee (Eds.), The nature of school bullying: A cross national perspective (pp. 1-4). London: Routledge.

Smith, P. K., & Sharp, S. (Eds.). (1994). School bullying: Insights and perspectives. London: Routledge.

Stattin, H., & Magnusson, D. (1989). The role of early aggressive behavior in the frequency, seriousness, and types of later crime. Journal of Consulting and Clinical Psychology, 1, 312-321.

Sutton, J., Smith, P. K., & Swettenham, J. (1999a). Bullying and 'theory of mind': A critique of the 'social skills deficit' view of anti-social behaviour. Social Development, 8 (1), 117-134.

Sutton, J., Smith, P. K., & Swettenham, J. (1999b). Social cognition and bullying: Social inadequacy or skilled manipulation? British Journal of Developmental Psychology, 17 (3), 435-450.

Sutton, J., Smith, P. K., & Swettenham, J. (1999c). Socially undesirable need to be competent: A response to Crick and Dodge. Social Development, 8 (1), 132-134.

Tremblay, R.E. (2000). The origins of youth violence. ISUMA: Canadian Journal of Policy Research, 19-24.

Whitney, I., & Smith, P. K. (1993). A survey of the nature and extent of bullying in junior/middle and secondary schools. Educational Research, 35, 3-25.

Appendix A: Part I of Questionnaire

PART I

The purpose of this part of the questionnaire is to learn about how you think about things in life.

Please do **NOT** put your name on the questionnaire.

Read the questions **carefully** and answer them as **honestly** as possible. There are **NO** right or wrong answers and your answers will be kept **private.**

All the items in this part of the questionnaire are statements. You are asked to indicate your level of agreement or disagreement with each of the statements. You will be provided with a choice of six answers on a scale. The scale will be as follows:

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

There is only one section (A) in this part of the questionnaire. Please read the instructions before beginning that section.

Thank You!

Birthdate: _____   Initials (First & Last) _____

(month, day, year)

Grade: _____   Age: _____

Male / Female (please circle)

Section A: Circle the answer which best describes how much you agree or disagree with the following statements.

1. I am generous with my friends.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

2. I can't help losing my temper a lot.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

3. Sometimes you have to lie to get what you want.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

4. Sometimes I get bored.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

5. People need to be roughed up once in a while.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

6. If somebody looks or acts different, he/she is asking to be made fun of.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

7. I make mistakes because I hang around with the wrong crowd.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

8. If I see something I like that belongs to someone else, I will take it.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

9. People need to be accepted for who they are.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

10. You can't trust people because they will often lie to you.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

11. When I get mad, I don't care who gets hurt.

agree strongly   agree   agree slightly   disagree slightly   disagree   disagree strongly

12. If someone is forgetful enough to leave their locker open or unlocked, they deserve to have something stolen.

agree strongly   agree   agree slightly   disagree slightly   disagree   disagree strongly

13. You have to get even with people who don't show you respect.

agree strongly   agree   agree slightly   disagree slightly   disagree   disagree strongly

14. People who get teased or picked on, usually do something to deserve it.

agree strongly   agree   agree slightly   disagree slightly   disagree   disagree strongly

15. It is not a big deal to lie since everybody does it sometimes.

agree strongly   agree   agree slightly   disagree slightly   disagree   disagree strongly

16. Everyone has their own special talents.

agree strongly   agree   agree slightly   disagree slightly   disagree   disagree strongly

17. It is no use trying to stay out of fights.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

18. Everyone has the right to be happy.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

19. If you know you can get away with it, only a fool wouldn't steal.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

20. No matter how hard I try, I can't stay out of trouble.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

21. Only a wimp would walk away from a fight.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

22. If I hear people laugh around me, I get mad because I usually think they are laughing at me.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

23. It is O.K. to tell a lie if someone is dumb enough to fall for it.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

24. If I really want something, it doesn't matter how I get it.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

25. If you don't push people around, you will get picked on.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

26. Friends should be honest with each other.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

27. Spreading a rumour about someone is not very hurtful because most people assume that it is untrue anyway.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

28. It is O.K to lie to people, if they have just lied to you.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

29. I have tried to get even with someone.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

30. You should get what you need even if it means someone has to get hurt.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

31. In order to stop a rumour from spreading about you, you should start up a more interesting rumour about someone else.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

32. If I really want to do something, I don't care if it is legal or not.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

33. In the past, I have lied to get myself out of trouble.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

34. It is O.K to call people nasty or mean names if they make you mad.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

35. It is important to think of other people's feelings.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

36. A lie doesn't really matter if you don't know that person.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

37. If someone leaves something out on the playground, you might as well take it before somebody else does.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

38. People are always trying to start fights with me.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

39. If a rule stops me from doing what I want, I often think the rule is unfair and should be changed.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

40. Spreading a funny or interesting rumour about someone, is a good way to make others laugh.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

41. People should try to work on their problems.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

42. If someone is careless enough to lose a wallet, they deserve to have it stolen.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

43. Everybody breaks school rules, it is no big deal.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

44. When friends need you, you should be there for them.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

45. When I see two people whispering to each other, I usually think they are saying something mean about me.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

46. If people don't cooperate with me, it is not my fault if someone gets hurt.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

47. I have done bad things that I haven't told people about.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

48. I lose my temper because people try to make me mad.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

49. Taking someone's bike doesn't really hurt that person if nothing happens to the bike and the person gets it back.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

50. Everybody needs help once in a while.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

51. I might as well lie because when I tell the truth, people often don't believe me anyway.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

52. If you lie to someone, that is nobody else's business.

| agree strongly | agree | agree slightly | disagree slightly | disagree | disagree strongly |

53. Everybody steals sometimes, so you might as well get your share.

agree strongly	agree	agree slightly	disagree slightly	disagree	disagree strongly

Appendix B: Part II of Questionnaire

PART II

The purpose of this part of the questionnaire is to learn about how you relate to other students at school.

Please do **NOT** put your name on the questionnaire.

Read the questions **carefully** and answer them as **honestly** as possible. There are **NO** right or wrong answers and your answers will be kept **private.**

All questions in this part of the questionnaire ask you to indicate **how often** a certain event has occurred. You will be provided with a choice of five answers on a scale. The scale will be as follows:

never   rarely   sometimes   often   very often

There are two sections (A and B) in this part of the questionnaire. Please read the instructions for each section before beginning that section.

Thank You!

Birthdate: _____   Initials (First & Last)_____

                    (month, day, year)

Grade: _____   Age:_____

Male   /   Female (please circle)

Section A: For each of the following questions, a choice of answers has been provided. Please **circle** the answer which best describes **how often you have experienced these events during this school year.**

1. How often have <u>other students</u> listened to you when you had a problem?

     never   rarely   sometimes   often   very often

2. How often have <u>other students</u> called you mean or nasty names?

     never   rarely   sometimes   often   very often

3. How often have <u>other students</u> left you out from joining a group or a game?

     never   rarely   sometimes   often   very often

4. How often have <u>other students</u> helped you when you were hurt?

     never   rarely   sometimes   often   very often

5. How often have <u>other students</u> pushed, hit, or kicked you?

     never   rarely   sometimes   often   very often

6. How often have <u>other students</u> spread untrue stories or rumours about you?

     never   rarely   sometimes   often   very often

7. How often have <u>other students</u> been dared to push, hit, or kick you?

     never   rarely   sometimes   often   very often

8. How often have <u>other students</u> shared their things with you?

     never   rarely   sometimes   often   very often

9. How often have <u>other students</u> teased or made fun of you?

     never   rarely   sometimes   often   very often

10. How often have <u>other students</u> broken or taken things that belong to you?

     never   rarely   sometimes   often   very often

11. How often have <u>other students</u> been dared to take something that belongs to you?

     never   rarely   sometimes   often   very often

12. How often have <u>other students</u> included you in a group or a game?

     never   rarely   sometimes   often   very often

Section B: For each of the following questions, a choice of answers has been provided. Please **circle** the answer which best describes **how often you have been involved in these events during this school year**.

1. How often have <u>you</u> dared someone to push, hit, or kick other students?

      never   rarely   sometimes   often   very often

2. How often have <u>you</u> pushed, hit, or kicked other students?

      never   rarely   sometimes   often   very often

3. How often have <u>you</u> called other students mean or nasty names?

      never   rarely   sometimes   often   very often

4. How often have <u>you</u> listened to other students when they had a problem?

      never   rarely   sometimes   often   very often

5. How often have <u>you</u> left other students out from joining a group or a game?

      never   rarely   sometimes   often   very often

6. How often have <u>you</u> shared your things with other students?

      never   rarely   sometimes   often   very often

7. How often have <u>you</u> dared someone to take something that belongs to other students?

      never   rarely   sometimes   often   very often

8. How often have <u>you</u> spread untrue stories or rumours about other students?

      never   rarely   sometimes   often   very often

9. How often have <u>you</u> broken or taken things that belong to other students?

      never   rarely   sometimes   often   very often

10. How often have <u>you</u> included other students in a group or a game?

      never   rarely   sometimes   often   very often

11. How often have <u>you</u> teased or made fun of other students?

      never   rarely   sometimes   often   very often

12. How often have <u>you</u> helped other students when they were hurt?

      never   rarely   sometimes   often   very often

Appendix C: Standardized Administration Procedure

1) Introduce myself by providing my name and explain that the basic purpose of this research is to learn about how students think about things in life and how they relate to other students at school.

2) Thank participants for their participation in the research study.

3) Explain that the questionnaire has been divided into two parts and that each part is to be completed on a different day.

4) Discuss the main issues involved in their participation. Tell participants:

> a) their participation for each part will require 15-25 minutes of their time

> b) to work at their own pace

> c) to not worry about their friends' answers because the research focus is on one's own personal experiences and thoughts

> d) there are no right or wrong answers and that there will be neither positive nor negative consequences for certain responses

> e) that honesty is very important when answering the questionnaire.

Remind students that the researcher will be the only person to actually see the questionnaires and that their names are not wanted on the questionnaire.

5) Distribute the questionnaires to participants. Tell them to read the first page silently to themselves. Ask participants to wait before beginning.

6) Re-read the instructions aloud to the group. Ask participants if they have any questions.

7) Tell participants that if they have any questions while completing the questionnaire, they are to remain seated and raise their hands.

8) Tell participants, when they have completed the questionnaire, that they may bring the questionnaire to the researcher, and return to their regular class.

9) Let participants begin.

Appendix D: Range of Responses by Item for Part I

Item	Minimum	Maximum	M	SD
I am generous with my friends.	1	6	5.02	0.82
I can't help losing my temper a lot.	1	6	3.32	1.55
Sometimes you have to lie to get what you want.	1	6	3.09	1.60
Sometimes I get bored.	1	6	1.63	0.94
People need to be roughed up once in a while.	1	6	3.11	1.53
If somebody looks or acts different, he/she is asking to be made fun of.	1	6	1.75	1.18
I make mistakes because I hang around the wrong crowd.	1	6	2.43	1.44
If I see something I like that belongs to someone else, I will take it.	1	6	1.46	0.85
People need to be accepted for who they are.	1	6	5.60	0.76
You can't trust people because they will often lie to you.	1	6	3.60	1.39
When I get mad, I don't care who gets hurt.	1	6	2.18	1.50

Item	Minimum	Maximum	M	SD
If someone is forgetful enough to leave their locker open or unlocked, he/she deserves to have something stolen.	1	6	1.76	1.14
You have to get even with people who don't show you respect.	1	6	2.54	1.42
People who get teased or picked on, usually do something to deserve it.	1	6	2.76	1.58
It is not a big deal to lie since everybody does it sometimes.	1	6	2.75	1.39
Eveyone has their own special talents.	1	6	5.57	0.88
It is no use trying to stay out of fights.	1	6	2.49	1.50
Everyone has the right to be happy.	1	6	5.73	0.78
If you know you can get away with it, only a fool wouldn't steal.	1	6	2.03	1.48
No matter how hard I try, I can't stay out of trouble.	1	6	2.51	1.47
Only a wimp would walk away from a fight.	1	6	2.02	1.48

Item	Minimum	Maximum	M	SD
If I hear people laugh around me, I get mad because I usually think they are laughing at me.	1	6	3.08	1.52
It is O.K. to tell a lie if someone is dumb enough to fall for it.	1	6	2.19	1.28
If I really want something, it doesn't matter how I get it.	1	6	2.29	1.33
If you don't push people around, you will get picked on.	1	6	2.08	1.26
Friends should be honest with each other.	1	6	5.66	0.87
Spreading a rumour about someone is not very hurtful because most people assume it is untrue anyway.	1	6	2.31	1.55
It is O.K. to lie to people, if they have just lied to you.	1	6	2.43	1.31
I have tried to get even with someone.	1	6	2.65	1.50
You should get what you need even if it means someone has to get hurt.	1	6	1.63	0.84

Item	Minimum	Maximum	M	SD
In order to stop a rumour from spreading about you, you should start up a more interesting rumour about someone else.	1	6	2.16	1.36
If I really want to do something, I don't care if it is legal or not.	1	6	1.63	0.98
In the past, I have lied to get myself out of trouble.	1	6	2.77	1.50
It is O.K. to call people nasty or mean names if they make you mad.	1	6	2.75	1.43
It is important to think of other people's feelings.	1	6	5.43	0.94
A lie doesn't really matter if you don't know that person.	1	6	2.21	1.24
If someone leaves something out on the playground, you might as well take it before somebody else does.	1	6	2.03	1.17
People are always trying to start fights with me.	1	6	2.78	1.61
If a rule stops me from doing what I want, I often think the rule is unfair and should be changed.	1	6	3.40	1.52

Item	Minimum	Maximum	M	SD
Spreading a funny or interesting rumour about someone, is a good way to make others laugh.	1	6	2.60	1.54
People should try to work on their problems.	1	6	5.30	1.02
If someone is careless enough to lose a wallet, they deserve to have it stolen.	1	6	1.76	1.23
Everybody breaks school rules, it is no big deal.	1	6	2.67	1.52
When friends need you, you should be there for them.	1	6	5.68	0.59
When I see two people whispering to each other, I usually think they are saying something mean about me.	1	6	3.48	1.55
If people don't cooperate with me, it is not my fault if someone gets hurt.	1	6	2.17	1.33
I have done bad things that I haven't told people about.	1	6	3.32	1.69
I lose my temper because people try to make me mad.	1	6	3.68	1.62

Item	Minimum	Maximum	M	SD
Taking someone's bike doesn't really hurt that person if nothing happens to the bike and the person.	1	6	2.21	1.42
Everybody needs help once in a while.	1	6	5.57	0.71
I might as well lie because when I tell the truth, people often don't believe me anyway.	1	6	2.49	1.51
If you lie to someone, that is nobody else's business.	1	6	3.47	1.57
Everybody steals sometime, so you might as well get your share.	1	6	1.57	0.99

Appendix E: Range of Responses by Item for Part II

Item	Minimum	Maximum	M	SD
How often have other students listened to you when you had a problem?	1	5	3.30	1.13
How often have other students called you mean or nasty names?	1	5	3.24	1.12
How often have other students left you out from joining a group or a game?	1	5	2.63	1.19
How often have other students helped you when you were hurt?	1	5	3.72	1.14
How often have other students pushed, hit, or kicked you?	1	5	2.52	1.26
How often have other students spread untrue stories or rumours about you?	1	5	2.34	1.16
How often have other students been dared to push, hit, or kick you?	1	5	1.79	0.98
How often have other students shared their things with you?	1	5	3.86	1.05
How often have other students teased or made fun of you?	1	5	2.85	1.19

Item	Minimum	Maximum	M	SD
How often have other students broken or taken things that belong to you?	1	5	2.41	1.13
How often have other students been dared to take something that belongs to you?	1	5	1.67	0.98
How often have other students included you in a group or a game?	1	5	4.15	1.02
How often have you dared someone to push, hit, or kick other students?	1	5	1.56	0.84
How often have you pushed, hit, or kicked other students?	1	5	2.29	1.00
How often have you called other students mean or nasty names?	1	5	2.59	1.03
How often have you listened to other students when they had a problem?	1	5	4.11	0.96
How often have you left other students out from joining a group or game?	1	5	2.00	0.96

Item	Minimum	Maximum	M	SD
How often have you shared your things with other students?	1	5	4.06	0.96
How often have you dared someone to take something that belongs to other students?	1	5	1.32	0.64
How often have you spread untrue stories or rumours about other students?	1	5	1.55	0.79
How often have you broken or taken things that belong to other students?	1	5	1.47	0.78
How often have you included other students in a group or a game?	1	5	4.23	0.83
How often have you teased or made fun of other students?	1	5	2.47	1.04
How often have you helped other students when they were hurt?	1	5	4.21	0.88

Appendix F: Percentage by Item for Part I

Item			Percentage			
	DStr	D	DSli	ASli	A	AStr
I am generous with my friends.	<1	1	1	16	56	26
I can't help losing my temper a lot.	13	24	17	24	11	12
Sometimes you have to lie to get what you want.	23	20	14	20	17	6
Sometimes I get bored.	<1	2	2	10	28	59
People need to be roughed up once in a while.	19	22	16	23	15	6
If somebody looks or acts different, he/she is asking to be made fun of.	59	26	5	6	2	2
I make mistakes because I hang around the wrong crowd.	33	30	12	15	7	4
If I see something I like else, I will take it.	67	26	2	3	<1	1
People need to be accepted for who they are.	<1	1	<1	4	23	70
You can't trust people because they will often lie to you.	7	19	18	29	18	9
When I get mad, I don't care who gets hurt.	44	29	9	6	6	6

Item	DStr	D	Percentage DSli	ASli	A	AStr
If someone is forgetful enough to leave their locker open or unlocked, he/she deserves to have something stolen.	57	27	8	4	3	1
You have to get even with people who don't show you respect.	28	31	14	16	6	4
People who get teased or picked on, usually do something to deserve it.	25	30	12	14	11	7
It is not a big deal to lie since everybody does it sometimes.	20	29	24	16	7	5
Eveyone has their own special talents.	1	1	<1	1	26	70
It is no use trying to stay out of fights.	30	34	12	11	7	6
Everyone has the right to be happy.	1	1	<1	<1	14	83
If you know you can get away with it, only a fool wouldn't steal.	52	24	9	3	6	5
No matter how hard I try, I can't stay out of trouble.	31	29	15	15	6	5
Only a wimp would walk away from a fight.	54	20	11	5	3	7

Item			Percentage			
	DStr	D	DSli	ASli	A	AStr
If I hear people laugh around me, I get mad because I usually think they are laughing at me.	15	31	12	22	12	8
It is O.K. to tell a lie if someone is dumb enough to fall for it.	37	33	14	10	3	3
If I really want something, it doesn't matter how I get it.	33	34	14	10	7	2
If you don't push people around, you will get picked on.	38	40	8	6	5	3
Friends should be honest with each other.	2	<1	0	4	14	80
Spreading a rumour about someone is not very hurtful because most people assume it is untrue anyway.	43	25	9	9	10	4
It is O.K. to lie to people, if they have just lied to you.	28	35	16	14	5	3
I have tried to get even with someone.	5	10	11	20	26	28
You should get what you need even if it means someone has to get hurt.	54	35	7	3	<1	<1

Item	Percentage					
	DStr	D	DSli	ASli	A	AStr
In order to stop a rumour from spreading about you, you should start up a more interesting rumour about someone else.	40	33	11	6	7	3
If I really want to do something, I don't care if it is legal or not.	59	27	8	3	1	1
In the past, I have lied to get myself out of trouble.	7	9	11	20	31	21
It is O.K. to call people nasty or mean names if they make you mad.	20	34	12	20	9	4
It is important to think of other people's feelings.	1	1	2	5	30	61
A lie doesn't really matter if you don't know that person.	34	36	13	12	3	2
If someone leaves something out on the playground, you might as well take it before somebody else does.	40	36	11	9	4	1
People are always trying to start fights with me.	26	30	10	17	9	8
If a rule stops me from doing what I want, I often think the rule is unfair and should be changed.	9	28	15	20	18	10

Item			Percentage			
	DStr	D	DSli	ASli	A	AStr
Spreading a funny or interesting rumour about someone, is a good way to make others laugh.	28	32	14	13	6	8
People should try to work on their problems.	2	1	3	6	35	53
If someone is careless enough to lose a wallet, they deserve to have it stolen.	61	20	7	7	2	2
Everybody breaks school rules, it is no big deal.	25	33	13	15	8	7
When friends need you, you should be there for them.	0	<1	0	3	23	73
When I see two people whispering to each other, I usually think they are saying something mean about me.	10	24	16	21	18	12
If people don't cooperate with me, it is not my fault if someone gets hurt.	37	36	11	9	3	4
I have done bad things that I haven't told people about.	15	18	7	22	23	16
I lose my temper because people try to make me mad.	11	19	14	21	18	17

Item			Percentage			
	DStr	D	DSli	ASli	A	AStr
Taking someone's bike doesn't really hurt that person if nothing happens to the bike and the person gets it back.	38	36	9	8	3	6
Everybody needs help once in a while.	<1	1	0	2	32	64
I might as well lie because when I tell the truth, people often don't believe me anyway.	34	29	11	14	7	5
If you lie to someone, that is nobody else's business.	14	17	20	21	17	12
Everybody steals sometime, so you might as well get your share.	66	22	5	4	2	<1

Appendix G: Percentage by Item for Part II

N = Never; R = Rarely; S = Sometimes; O = Often; VO = Very Often

Item	Percentage				
	N	R	S	O	VO
How often have other students listened to you when you had a problem?	7	17	31	30	16
How often have other students called you mean or nasty names?	5	21	34	23	16
How often have other students left you out from joining a group or a game?	17	36	23	16	9
How often have other students helped you when you were hurt?	4	13	20	32	30
How often have other students pushed, hit, or kicked you?	23	35	19	13	10
How often have other students spread untrue stories or rumours about you?	27	35	21	11	6
How often have other students been dared to push, hit, or kick you?	52	25	16	7	<1
How often have other students shared their things with you?	2	11	18	37	32
How often have other students teased or made fun of you?	10	38	22	18	12

Item		Percentage			
	N	R	S	O	VO
How often have other students broken or taken things that belong to you?	22	38	20	15	5
How often have other students been dared to take something that belongs to you?	58	27	7	6	2
How often have other students included you in a group or a game?	1	8	15	27	49
How often have you dared someone to push, hit, or kick other students?	62	25	10	2	1
How often have you pushed, hit, or kicked other students?	22	41	26	8	3
How often have you called other students mean or nasty names?	12	41	29	13	5
How often have you listened to other students when they had a problem?	3	3	13	42	39
How often have you left other students out from joining a group or game?	34	41	18	4	2
How often have you shared your things with other students?	2	5	15	40	37

Item		Percentage			
	N	R	S	O	VO
How often have you dared someone to take something that belongs to other students?	75	18	5	<1	<1
How often have you spread untrue stories or rumours about other students?	60	30	7	3	<1
How often have you broken or taken things that belong to other students?	65	26	6	1	1
How often have you included other students in a group or a game?	<1	3	13	40	44
How often have you teased or made fun of other students?	17	40	28	12	4
How often have you helped other students when they were hurt?	1	4	10	42	43

Appendix H: Percent of Participants Classified as Bullies

Value	Frequency	Valid Percent	Cumulative Percent
8.00	10	5.3	5.3
9.00	8	3.9	9.2
10.00	9	4.3	13.5
11.00	15	7.2	20.8
12.00	24	11.6	32.4
13.00	21	10.1	42.5
14.00	19	9.2	51.7
15.00	17	8.2	59.9
16.00	12	5.8	65.7
17.00	9	4.3	70.0
18.00	15	7.2	77.3
19.00	10	4.8	82.1
20.00	7	3.4	85.5
21.00	7	3.4	88.9
22.00	4	1.9	90.8
23.00	5	2.4	93.2
24.00	3	1.4	94.7
25.00	5	2.4	97.1
26.00	1	0.5	97.6
27.00	1	0.5	98.1
28.00	2	1.0	99.0
29.00	1	0.5	99.5
30.00	1	0.5	100.0

Appendix I: Percent of Participants Classified as Victims

Value	Frequency	Valid Percent	Cumulative Percent
8.00	1	0.5	0.5
9.00	2	1.0	1.5
10.00	4	1.9	3.4
11.00	4	1.9	5.3
12.00	14	6.8	12.1
13.00	10	4.9	17.0
14.00	16	7.8	24.8
15.00	15	7.3	32.0
16.00	14	6.8	38.8
17.00	12	5.8	44.7
18.00	11	5.3	50.0
19.00	11	5.3	55.3
20.00	11	5.3	60.7
21.00	10	4.9	65.5
22.00	7	3.4	68.9
23.00	9	4.4	73.3
24.00	7	3.4	76.7
25.00	10	4.9	81.6
26.00	6	2.9	84.5
27.00	6	2.9	87.4
28.00	8	3.9	91.3
29.00	5	2.4	93.7
30.00	3	1.5	95.1
31.00	3	1.5	96.6
32.00	2	1.0	97.6
33.00	2	1.0	98.5
34.00	0	0.0	98.5
35.00	1	0.5	99.0
36.00	0	0.0	99.0
37.00	0	0.0	99.0
38.00	1	0.5	99.5
39.00	1	0.5	100.0