

2006

Bullying and victimisation in primary schools: Relations between bully status, empathy, and gender

Teresa B. Sapienza
Edith Cowan University

Follow this and additional works at: https://ro.ecu.edu.au/theses_hons



Part of the [Child Psychology Commons](#), and the [Personality and Social Contexts Commons](#)

Recommended Citation

Sapienza, T. B. (2006). *Bullying and victimisation in primary schools: Relations between bully status, empathy, and gender*. Edith Cowan University. https://ro.ecu.edu.au/theses_hons/1129

This Thesis is posted at Research Online.
https://ro.ecu.edu.au/theses_hons/1129

Edith Cowan University

Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study.

The University does not authorize you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following:

- Copyright owners are entitled to take legal action against persons who infringe their copyright.
- A reproduction of material that is protected by copyright may be a copyright infringement. Where the reproduction of such material is done without attribution of authorship, with false attribution of authorship or the authorship is treated in a derogatory manner, this may be a breach of the author's moral rights contained in Part IX of the Copyright Act 1968 (Cth).
- Courts have the power to impose a wide range of civil and criminal sanctions for infringement of copyright, infringement of moral rights and other offences under the Copyright Act 1968 (Cth). Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

Bullying and Victimisation in Primary Schools: Relations between Bully Status,
Empathy, and Gender

Teresa B. Sapienza

A report submitted in Partial Fulfilment of the Requirements for the Award of
Bachelor of Science (Psychology) Honours,
Faculty of Computing, Health and Science,
Edith Cowan University

October, 2006

I declare that this written assignment is my own work and does not include:

- (i) material from published sources used without proper acknowledgement;
- or
- (ii) material copied from the work of other students.

Signature: _____

Date: 29-10-06

Declaration

I certify that this thesis does not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature: _

Date: _

Acknowledgements

I would like to express my gratitude to those who have contributed to the completion of this thesis with their encouragement and support.

Firstly, thankyou to the Principals and Teachers at the participating schools, for showing interest in the research and for allowing me into your schools and classrooms. Thankyou also to the students who participated in the research and their parents for giving consent. I appreciate the honesty with which you completed the questionnaires.

To my supervisor, Professor Alison Garton, thankyou for your time, guidance and support throughout the project. I would also like to thank John Forbes for his willingness to offer advice and encouragement during the early stages of the project, and Dr Ken Rigby for allowing me to adapt and use questions from the PRQ.

To my parents and friends, thankyou for your encouragement and patience. Also, a special thankyou goes to my mother and father-in-law for their help and support over the course of the project.

Finally, I would like to thank my husband and children for their encouragement, support and patience throughout the project.

Table of Contents

Literature Review

Title Page	1
Abstract	2
Introduction	3
Bullying and Victimisation	4
<i>Definitional Issues</i>	4
<i>Types of Bullying/Victimisation</i>	6
<i>Bullying Role Classification</i>	7
<i>Symptoms and Effects</i>	8
<i>Prevalence</i>	9
<i>Research Measures</i>	11
<i>Intervention Effectiveness</i>	13
<i>Summary</i>	14
Empathy	15
<i>Definition</i>	16
<i>Cognitive and Affective Empathy</i>	17
<i>Research Measures</i>	19
<i>Empathy Training</i>	21
<i>Summary</i>	21
Gender	22
<i>Gender and Bullying</i>	22
<i>Gender and Empathy</i>	23
<i>Summary</i>	24
Conclusions	24
References	28

Research Project

Title Page	37
Abstract	38
Introduction	39
<i>Bullying and Victimisation</i>	39

<i>Empathy</i>	42
<i>Gender</i>	44
<i>Summary</i>	45
<i>Research Questions</i>	46
Method	46
<i>Participants</i>	46
<i>Materials</i>	47
<i>Procedure</i>	48
<i>Bully Status Classification</i>	49
Results	51
<i>Data Screening</i>	51
<i>Descriptive Statistics</i>	52
<i>Analysis</i>	52
Discussion	54
<i>Limitations and Future Research</i>	58
References	61

Tables

Table 1	68
Table 2	69
Table 3	70

Appendices

Appendix A	Participant Information Letter	71
Appendix B	Informed Consent Form	73
Appendix C	Principal and Teacher Information Letter	74
Appendix D	Participant Information and Instructions	76
Appendix E	Bullying Definition	77
Appendix F	Bullying and Victimisation Questionnaire	78
Appendix G	Feeling & Thinking (F&T) Scale	81
Appendix H	Raw Data Table	83
Appendix I	Raw Data Key	89
Appendix J	Statistical Analysis Output	90

Running head: BULLYING AND VICTIMISATION, EMPATHY AND GENDER

Relations between Bullying and Victimization, Empathy, and Gender:

A Review of the Literature

Teresa B. Sapienza

Edith Cowan University

Abstract

Bullying and victimisation at school has been associated with increased reports of psychological and psychosomatic health issues. As such, schools have sought to implement programmes to reduce the prevalence of bullying. These programmes commonly include empathy-raising strategies which are expected to reduce the incidences of bullying. The present paper reviews the empathy and bullying literature, focussing on the suggested relationship between the two. The literature revealed that the concepts of empathy and bullying have undergone rapid development over recent years and as a result, there is much methodological variation between studies, culminating in inconsistent results. However, early research pertaining to the association between bullying and empathy has suggested that aggressive behaviour is associated with lower empathy levels, although this difference may be attributed to affective empathy (emotional arousal) whereas cognitive empathy-raising strategies are used in bullying intervention programmes. Overall, little research examined the influence of affective and cognitive empathy separately, and very few studies attempted to examine the bullying/empathy relationship. As such, future research to examine the empathy/bullying relationship, including consideration of empathy types, bullying roles, and gender, would inform the development of effective bullying intervention programmes. Additionally, as there is much variation in research results for empathy and bullying, future research would benefit from adhering to suggested definitions, measures and methods to reduce methodological variation and gain data which are comparable across studies.

Author: Teresa B Sapienza

Supervisor: Professor Alison Garton

Submitted: August, 2006

Relations between Bullying and Victimization, Empathy, and Gender:

A Review of the Literature

In the past, bullying has been seen and accepted as part of the school experience. However, over the previous 20 years, an increased awareness of adverse effects from school bullying has resulted in that belief no longer being considered acceptable. The issue of bullying is now taken seriously by schools which tend to have management plans implemented in an attempt to minimise bullying behaviour and its harmful consequences. However, bullying interventions have had, at best, only moderate success in reducing bullying at schools (Rigby, 2002).

Bullying behaviour is a complex social issue, and research into understanding the dynamics of bullying is still in its infancy. However, as research results have consistently found that aggressive behaviour is associated with low levels of empathy (Cohen & Strayer, 1996; Kaukiainen et al., 1999; Miller & Eisenberg, 1988; Schultz, IZard, & Bear, 2004; Strayer & Roberts, 2004), it has been inferred that empathy level also influences bullying behaviour in schools. As such, increasing children's ability to empathise has been one strategy employed as part of most school bullying programmes.

Empathy has also undergone rapid development in research literature over the previous two decades and the issue of its relationship with aggression is beginning to be explored in more depth. However, despite the assumption of empathy's applicability to bullying behaviour, the two concepts are generally explored separately and the dynamics of the bullying/empathy relationship have been relatively untested in published research.

Gender has been associated with variances in bullying and victimization involvement, as well as in empathic responding. Research has suggested that boys

are more often involved in bullying behaviour (Eagly & Steffen, 1986; Scheithauer, Hayer, Petermann, & Jugert, 2006), and have lower levels of empathy than girls (Cohen & Strayer, 1996; Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000). Therefore, it is important to consider the impact of gender in research results, and consequently, the inferences drawn regarding associations between bullying and empathy.

The present paper reviews literature pertaining to bullying and empathy, and the suggested relationship between the two. In addition, the influence of gender on patterns of bullying and empathy will be briefly explored. Firstly, bullying and victimisation research will be presented, including prevalence, adverse effects, and intervention effectiveness. Definitional issues, types of bullying that occur, classifications of roles in bullying, and methods of research will also be explored. Secondly, literature on empathy will be presented and explored in a similar manner with focus on relations with aggression and bullying. Finally, research examining the influence of gender on both bullying and empathy will be briefly presented, and inferences of the bullying/empathy/gender relationships will be drawn and suggestions for future research presented.

Bullying and Victimisation

Definitional Issues

The definition of bullying has been the subject of considerable debate in the research literature (Sanders, 2004). Griffin and Gross (2004) suggested the lack of a clear and dominant operational definition of bullying has led to insufficient focus in current research, and consequently, a wide range of results.

Prior to the 1990s, bullying was primarily seen as direct physical or verbal attacks (Smith, 2004). However, more recent researchers have tended to use the

definition surmised by Olweus (1993) which states "...a student is being bullied or victimized when he is exposed repeatedly and over time to negative actions on the part of one or more other students" (p.9). This definition involves two important components, the repeated nature of the bullying, and the actions are negative. In this definition, the 'repetition' component excludes single negative events from being classed as bullying, and the 'negative actions' component allows for a wide variety of behaviours to be classed as bullying. Other researchers have suggested a need to address the imbalance of power between the bully and victim within the definition. Rigby (1996) defined bullying as "the repeated oppression, psychological, or physical, of a less powerful person by a more powerful person or group of persons" (p. 15). However, there is some debate over whether an action necessarily needs to be repeated in order to be called 'bullying' (Rigby, 2002). It could be argued that if the action is serious enough, the potential ongoing power imbalance and the victims fear of a similar incident re-occurring may be enough for the torment to be ongoing or 'repeated' without another incident necessarily occurring.

Although these definitions are both useful and necessary for guiding research, they do not describe what a bully actually does and what types of bullying occur. Griffin and Gross (2004) reported that children often define bullying as involving physical or direct aggression and do not consider indirect methods as bullying. According to Griffin and Gross, this can lead to students providing flawed information in self-reports and influence the results and subsequent interpretations of research findings. Juvonen and Graham (2004) suggested that children need concrete examples of bullying behaviour rather than abstract definitions to be incorporated into research and school policies.

Types of Bullying/Victimisation

In the 1980s, bullying research primarily examined direct physical and verbal attacks. Although some researchers still examine bullying or aggression based solely on direct methods (Hodges, Malone, & Perry, 1997), in recent years research parameters have been broadened to include indirect or relational bullying.

Direct bullying involves explicit aggression from the bully toward the victim whereas indirect bullying involves a third party (Sanders, 2004) and does not involve a direct confrontation between the bully and the victim (Griffin & Gross, 2004; Kaukiainen et al., 1999). Direct bullying can be both physical and verbal aggression toward the victim such as hitting, pushing, kicking, threats and name-calling (Juvonen & Graham, 2004; Rigby, 1996) whereas indirect bullying harms others through damage to relationships (Bonica, Arnold, Fisher, Zeljo, & Yershova, 2003) and includes ignoring, exclusion, and rumour spreading (Olweus, 1993; van der Wal, de Wit, & Hirasing, 2003). Limited research has examined the difference between direct and indirect bullying, however Sharp (1995, cited in Sanders, 2004) found the majority of 13- to 16-year-olds reported indirect bullying as the most hurtful and stressful, and van der Wal et al. (2003) found that depression and suicidal ideation were more strongly associated with indirect than direct bullying.

Of the behaviours classified as bullying, numerous research papers have found that name-calling is the most common form of bullying (Olweus, 1993; Rigby, 1996) followed by teasing, pushing, threatening, exclusion, hitting, rumour spreading, punching and damaging things (Karatzias, Power, & Swanson, 2002). With the advancement of technology, the definition of bullying has also needed to be flexible in order to encompass variations of bullying such as sending threatening email or mobile phone messages (Li, 2006).

Bullying Role Classification

Earlier research tended to classify participants simply as bullies and victims, with these considered mutually exclusive due to the patterns of behaviour being considered opposite. However, a growing body of research has begun to recognise that some children fit into both categories. Research examining roles in bullying has identified four common categories; those who bully others (bullies), those who are victimised (victims), those who bully others and are also victimised themselves (bully/victims), and those who are not bullies or victims (not-involved) (Baldry, 2004; Camodeca, Goossens, Meerum Terwogt, & Schuengel, 2002; Forero, McLellan, Rissel, & Bauman, 1999; Perren & Alsaker, 2006; Rigby, 1998b; Salmivalli & Nieminen, 2002; Veenstra et al., 2005; Yang, Kim, Kim, Shin, & Yoon, 2006).

Salmivalli and Nieminen (2002) suggested it is important for researchers to distinguish between bullies, victims and bully/victims because bully/victims differ from both bullies and victims in several respects. For example, in comparing victims and bully/victims, Salmivalli and Nieminen found that victims tended to internalise problems whilst bully/victims showed high levels of externalising behaviour. In addition, Smith, Talamelli, Cowie, Naylor, and Chauhan (2004) found that students who were bully/victims were more likely to be victimised over an extended period of time than pure victims, and Unnever (2005) found that bully/victims were almost twice as likely to be physically bullied than pure victims. Veenstra et al. (2005) also found that bully/victims had lower levels of academic performance and were less liked than pure victims. In comparing pure bullies and bully/victims, Veenstra et al. reported that bully/victims were more likely to be isolated by their peers than bullies. Similarly, Perren and Alsaker (2006) found that bully/victims frequently had no

playmates whereas bullies belonged to larger social groups, and Perry, Kusel, and Perry (1988) found that bully-victims were generally rejected. Unnever found that bully/victims were more likely to physically bully and less likely to verbally bully than pure bullies, and they were also more likely to be reactively aggressive whilst bullies were more likely to be proactively aggressive.

Based on these differences in research findings, treating bully/victims as either victims or bullies is likely to distort research findings and interpretations. Additionally, important information for the development of effective intervention strategies is likely to be overlooked.

Symptoms and Effects

Bullying presents a significant threat to the healthy development of children (Veenstra et al., 2005). As research uncovers the negative effects of bullying for both bullies and victims, the common view that bullying is a necessary part of growing up and is character building is being challenged (Smith & Brain, 2000). Research has revealed that children involved in bullying experience increased psychological, psychosomatic and behavioural symptoms (Salmon & West, 2000), such as low self-esteem (Rigby & Slee, 1993), increased anxiety (Baldry, 2004), headaches and stomach aches (Williams, Chambers, Logan, & Robinson, 1996), depression (Crick & Grotpeter, 1995), suicidal ideation (Rigby, 1998b), and increased alcohol consumption (Olweus, 1993). Longitudinal research has also suggested that these symptoms can persist into adolescence and adulthood (Olweus; Rigby, 1998a).

Often in bullying research, studies examine factors from the perspective of either the bully or the victim. This is true for research into symptoms of bullying and victimisation, however symptoms can vary depending upon the role played in the

bullying experience. For example, in research by Forero et al. (1999), students classified as 'bullies' showed increased psychosomatic symptoms (e.g., headache, stomach ache, sleeping difficulties), bully/victims had the highest frequency and number of reported psychosomatic symptoms, and victims were more likely to feel isolated. Victims have often been reported as more likely to have symptoms of depression and anxiety (Hawker & Boulton, 2000; Rigby, 1996). Whereas research by Yang et al. (2006) found that both bullying and victimisation were associated with having fewer friends, lower academic achievement, lower self-esteem, increased behavioural problems, reports of maladjustment, increased depression, state- and trait-anxiety, and poor body satisfaction. Of particular note is the prevalence of depressive symptoms in the research which found that 48% of bullies and 55% of victims had depressive symptoms (Yang et al., 2006).

Prevalence

Despite many schools adopting some form of anti-bullying campaign over the previous 10-15 years (Rigby, 2002), the prevalence of bullying and victimisation remains high (Rigby, 2004). International research has suggested that bullying will occur in most school environments (Smith & Brain, 2000) with 49% of children experiencing some form of bullying at least once or twice in a term (Charach, Pepler, & Ziegler, 1995). Likewise, according to Rigby (2004), bullying is the most predominant form of aggression found in Australian schools with approximately 50 percent of students having experienced some form of bullying. On a regular basis, Australian research has estimated that approximately 1 in 4 children is involved in bullying others (Forero et al., 1999), whilst 1 in 6 children is the victim of bullying on a weekly basis (Rigby, 1997).

However, there is much variance in reported prevalence rates in the research

literature. Reports of bullying prevalence have ranged from 4.3% (Wolke, Woods, Bloomfield, & Karstadt, 2001) to 49.5% (Baldry, 2004) whilst reports of victimisation prevalence have ranged from 5.3% (Kumpulainen, Räsänen, & Henttonen, 1999; Yang et al., 2006) to 56.5% (Baldry), and those who are involved in both bullying others and are the bullied themselves range from 2.9% (Camodeca et al., 2002) to 21.5% (Forero et al., 1999).

Apart from real differences in bullying and victimisation, variations are often a factor of methodological differences between studies, such as differences in definitions, classification methods, reporting time frames and measures. This can be illustrated by comparison of the following research studies.

Baldry (2004) reported that of 661 adolescents from Rome, 49.5% bullied others and 56.5% were victimised. However, Baldry's research had two distinct methodological differences to studies reporting lower prevalence rates. Firstly, the time frame used was 'the previous 12 months' which is a longer time period than most recent bullying research, and secondly, Baldry classified students as bullies or victims if they admitted being bullied or bullying others at least sometimes. The latter is a less strict behaviour frequency than commonly used in recent research, many of which classify bullies and victims based on involvement at least 'once a week or more'. In combination, the longer period for reporting in Baldry's research (12 months) and the less stringent classification of bullies and victims resulted in substantially larger prevalence rates being reported.

In 1999, Forero et al. conducted research involving 3,918 Australian schoolchildren from years 6 to 10. Using self-report surveys, they found that 23.7% of students bullied other students, 12.7% were victims of bullying, and 21.5% were both bullies and victims. Self-reports on bullying are commonly answered using

frequency of involvement measures for a number of situations. However, this study required dichotomised responses on two questions, whether they had been bullied this term, or whether they had taken part in bullying this term. Without the restriction of frequency measures, higher prevalence rates were reported however, the time period of 'this term' limited the figures from reaching levels similar to those of Baldry's results.

As research into bullying matures, researchers are beginning to use similar definitions, classifications, and methods of measurement. Consequently, research has begun to reveal more consistent prevalence rates. For example, Perren and Alsaker (2006) conducted research with 344 children aged five to seven years, using a combination of teacher ratings and peer nominations. They reported that 11% of students were classified as bullies, 6% as victims, and 10% as bully/victims. Camodeca et al. (2002) also used peer nominations with seven-year-old children and classified 9.7% of children as bullies, 8.5% as victims, 7.6% as bully/victims. Finally, Yang et al. (2006) examined the prevalence of bullying and victimisation in South Korean primary schools using self-report scales and, of 1187 children, 12% were classified as bullies, 5.3% as victims, and 7.2% as bully/victims.

Research Measures

In the research literature, bullying and victimisation have been assessed using several measures, however the most common methods are teacher reports, peer nominations, and student self-reports.

Rigby (1996) suggested teachers have the opportunity to observe student interactions over a period of time, and therefore, can give insightful information. Although teacher reports allows for an additional perspective to be considered, several concerns have been raised with this method of measurement. Firstly,

teachers vary in their awareness or attentiveness to social interactions among students (Griffin & Gross, 2004) therefore the measure is inconsistent. Furthermore, teachers are less likely to see the extent of bullying which occurs in the playground or before and after school (Rigby, 1996), and are less likely to identify indirect/relational bullying (Baldry, 2004; Juvonen & Graham, 2004).

As indirect methods of bullying are difficult to observe, and much bullying occurs without teachers present, it is challenging to measure accurately when relying on teacher reports. Rigby (1996) suggested that the students themselves are more likely to be aware of what is happening and are therefore the best source of information. Students can provide information in two main forms, peer nomination and self-reports.

Peer nomination methods typically consist of asking children to nominate peers who fit various descriptions (e.g., peers who are mean to others, or peers who are teased). This method allows the researcher to obtain information in which there is a high level of agreement of how students behave with their peers, and it provides objectivity that may be lacking in self-reports (Rigby, 1998a). This method has been popular in the research for examining bullying and aggression (e.g., Björkqvist, Lagerspetz, & Kaukiainen, 1992; Kaukiainen et al., 1999; Perren & Alsaker, 2006; Perry et al., 1988; Salmivalli & Nieminen, 2002), however Rigby (1996) suggested this approach requires a very high level of confidentiality to prevent labelling. In addition, social pressure or friendships may influence the nominations (Griffin & Gross, 2004).

The majority of large-scale surveys tend to rely on student self-report questionnaires (Smith, 2004). The method of self-reporting usually involves children completing a questionnaire examining the frequency and type of bullying. Self-

report questionnaires can also result in unreliable data (Griffin & Gross, 2004) as victims may be reluctant to disclose what is happening for fear of the victimisation increasing, and bullies are reluctant to advertise their involvement. However, by having the students complete the questions anonymously, these factors are minimised and students are secure enough to give accurate information (Rigby, 1996). Additionally, as indirect aggression is difficult to detect and perpetrators can avoid being identified as aggressive (Kaukiainen et al., 1999), Griffin and Gross suggested that self-report measures are currently the best measure for assessing indirect bullying.

Intervention Effectiveness

In Australia, it is now a legal requirement for all schools to have the National Safe Schools Framework (NSSF) implemented. The NSSF is a range of policies on bullying and violence in schools and provides guidance in developing and implementing programmes and practices, and in improving existing ones (International Network on School Bullying and Violence, 2005). Although internationally, intervention programmes have had some success, with reports of victimisation being reduced by up to 50% (Olweus, 1993; O'Moore & Minton, 2005), the majority of intervention programmes have had considerably lower levels of success (Grossman et al., 1997).

Based on research examining the effectiveness of an anti-bullying programme involving 42 primary schools in Ireland, O'Moore and Minton (2005) found that following implementation of the anti-bullying training programme, significant reductions in students reports of victimisation were found. The highest percentage of reduction (50%) was for the reporting of 'Frequently' being bullied, which was reduced to 3.6% of students. However, reductions in being bullied 'Occasionally'

and 'Moderately' were less impressive with 17.4% still reporting being bullied 'Occasionally' and 8.5% being bullied 'Moderately'.

In a meta-evaluation of 13 studies which measured the effectiveness of bullying intervention programmes, Rigby (2002) reported that reductions in prevalence were commonly confined to the proportions of students being bullied and not for those who bully others. Therefore, some interventions may result in a relatively larger number of students bullying a smaller proportion of students. Consequently, Rigby suggested that this smaller proportion of students is likely to endure more frequent bullying. Due to the increased intensity of victimisation, this proportion of students may also be at greater risk of adverse effects. Camodeca et al. (2002) also found that bullying was more stable than victimisation.

Rigby (2002) also found that studies which used control groups, in which bullying programmes were not implemented, tended to show trends of increasing bullying. Therefore, despite many programmes having a modest impact on reducing bullying behaviour, implementation of interventions at least curb the increasing trend of bullying behaviour.

Summary

Overall, with the increase in research, the definition of bullying has broadened from a 'physical' perspective to include verbal and indirect bullying behaviours. Additionally, classification of bullying roles now tends to include bullies, victims, bully/victims, and not-involved children. Whilst adverse effects of bullying are diverse, and research suggests they differ with a child's role in bullying, depressive symptoms appear to be consistently found for children involved in bully and/or victim roles. Prevalence rates have also varied greatly between studies, much of which is due to methodological differences. More recently, reported prevalence

rates have begun to reveal more consistency as some of these methodological differences are addressed. The advantages and disadvantages of different measures of bullying and victimisation have also been scrutinised. Collectively, researchers have suggested that as bullying and victimisation can be hard to detect by those not directly involved, anonymous self-report measures may produce the most accurate measurements of bullying and victimisation in schools. Finally, bullying interventions generally appear to have had low to moderate success in reducing bullying and victimisation and success has largely been confined to reductions in the proportion of victimised students.

Empathy

Increasing children's ability to empathise has been one strategy employed as part of school bullying programmes to decrease bullying behaviour. Its inclusion is based on consistent findings that aggressive behaviour is associated with lower levels of empathy (Cohen & Strayer, 1996; Feshbach, 1997; Giancola, 2003; Schultz et al., 2004; Strayer & Roberts, 2004). In addition, higher levels of empathy have been associated with increased pro-social or helping behaviour (Björkqvist, Österman, & Kaukiainen, 2000; Eisenberg & Miller, 1987; Litvack-Miller, McDougall, & Romney, 1997; Miller & Eisenberg, 1988; Strayer & Roberts) which could buffer the effects of bullying or reduce the occurrence of bullying.

Higher empathy rating has also been consistently associated with lower ratings of anxiety, depression and obsessiveness (Chlopan, McCain, Carbonell, & Hagen, 1985). Therefore, the ability to raise levels of empathy in schoolchildren may be beneficial to reduce bullying as well as to promote general well-being by lowering levels of anxiety, depression and obsessiveness.

A few studies have attempted to look more specifically at the aggression-

empathy relationship. For example, Kaukiainen et al. (1999) examined the correlation between empathy levels and three types of aggression (physical, verbal and indirect aggression) for 526 Finnish school children from three age groups, 10-, 12- and 14-year-olds. The results revealed that empathy was negatively correlated with every type of aggression for all age groups with the exception of indirect aggression in 12-year-old children. This suggests that empathy, when examined as an overall concept, is capable of being used as an intervention for both direct and indirect bullying. However, the measurement method in this research may have distorted results. Kaukiainen et al. used peer-estimation methods to measure empathy and although this is considered a valid method of measuring aggression and bullying, it is rarely used in examining empathy. Of particular concern were the items in the questionnaire which required peers to rate others' feelings, for example 'is upset when others are not treated fairly' and 'is able to feel joy about the success of others'. Such an approach requires the estimator to accurately identify how their peers are feeling and thinking, and therefore, the estimators own empathic ability is likely to have influenced empathy-estimations of others.

Overall, although empathy has been associated with aggression, the assumption of empathy's applicability to bullying has been relatively untested in current literature.

Definition

Empathy plays an important role in both positive and negative social interaction, however it has been difficult to define and measure (Cotton, 2001; Feshbach, 1997). Generally, empathy has been defined as an interaction between two individuals in which one shares and experiences the feelings of the other (Feshbach). Empathy has been suggested to be achieved through a process in which

other people's behaviour is observed, they search their own memories and experiences for ones which resulted in similar behaviour, and use those experiences to infer the internal experience of the other person (Buie, 1981, cited in Bohart & Greenberg, 1997).

Although empathy is defined as a shared emotional response, it also relies on cognitive factors (Feshbach, 1997). Recent definitions of empathy involve a combination of two aspects, affective (emotional arousal) and cognitive (understanding the emotion and perspective-taking) (Kaukiainen et al., 1999). The cognitive component refers to an individual's ability to identify affective cues in others and take on the perspective of others (Shechtman, 2002), whereas affective empathy refers to the arousal of emotion in response to another person's affective state (Feshbach) so that people's feelings are more congruent with the other's situation than with their own situation (Hoffman, 2000).

Cognitive and Affective Empathy

Both cognitive and affective aspects of empathy imply mechanisms which should result in lower aggression and increased prosocial behaviour in an empathic child. For example, the cognitive ability to label the feelings of others and discriminate between them is necessary to be able to take into account another person's perspective and therefore reduce misunderstandings and aggression, and promote co-operation and prosocial responses (Feshbach, 1997). According to Feshbach, the affective aspects should also regulate aggression as observing pain or distress should elicit distress in an empathic observer, even if the observer is the aggressor, and therefore act as an inhibitor of aggressive tendencies.

Until recently, research has generally failed to examine both aspects in one study and tended to examine empathy in solely cognitive or affective terms (Chlopan

et al., 1985; Cotton, 2001). However, recent literature has acknowledged the need for consideration of both perspectives to be included to gain an accurate measure of empathy (Cohen & Strayer, 1996; Eisenberg, Murphy, & Shepard, 1997; Feshbach, 1997). Although there is general consensus on the inclusion of both components in research measures, little research has sought to distinguish between cognitive and affective empathy.

Distinction between cognitive and affective empathy was considered in research by Shechtman (2002) who compared 25 aggressive boys to 27 non-aggressive boys (aged 7 to 14.5 years) on levels of aggression and on cognitive and affective empathy using ratings of statements made during group sessions. Shechtman found that aggressive boys showed similar levels of cognitive empathy to non-aggressive boys but the latter group showed double the levels of affective empathy. Despite the possibility of the group discussion method of measurement inhibiting affective empathic responses as well as aggressive statements, the results indicated that aggressive boys showed significantly lower levels of affective empathy in their statements than non-aggressive boys.

Similarly, research by Sutton, Smith, and Swettenham (1999) examined 193 7-10 year-old children on theory of mind tasks to determine whether bullies lacked social skills and understanding. The results revealed that bullies scored higher on social cognition than all other groups but not significantly higher than non-involved children. These results suggest that bullies have the ability to understand and interpret the social situation and the emotions of others however, do not follow this through in their behaviour. It also raises the question of why there is a behaviour difference between bullies and non-involved children if their ability to perceive and interpret the social situation and others emotions are not significantly different. In

terms of cognitive and affective empathy, this may relate to the cognitive component of empathy being similar between the two groups whilst the affective component of empathy may be what influences the choice of behaviour.

Research Measures

The measurement of empathy by social and developmental psychologists is often based upon its relationship with prosocial behaviour, such as morality and altruism (Litvack-Miller et al., 1997), and antisocial behaviour, such as aggression (Bohart & Greenberg, 1997). Measurement of empathy in this context typically includes examination of an individual's compassion for someone in distress or the ability to experience or perceive the affective state of another person (Bohart & Greenberg).

Miller and Eisenberg (1988) identified four frequently used methods of assessing empathy in research concerning aggression. These included picture/story methods which involved scoring individuals' self-reported affect to hypothetical stories for how well they match that of the story character; experimental procedures designed to elicit empathic responses through manipulating perspective taking or the degree of perceived similarity with a victim; interpretation of facial or gestural reactions to others' circumstances or emotions as depicted in stories, pictures or films; and self-reports on questionnaires or scales which assess empathic tendencies across various situations.

Based on reviews of the research literature, authors have concluded that the different measurement techniques produce varying results on the relationships between empathy and prosocial (Eisenberg & Miller, 1987) and anti-social (Miller & Eisenberg, 1988) behaviours. Additionally, several concerns regarding the reliability and validity of picture/story and experimental methods of measuring empathy have

been expressed (for reviews see Eisenberg & Miller; Miller & Eisenberg). Eisenberg and Miller suggested that questionnaire methods have an advantage over other methods as they do not require direct empathic responses and therefore do not require rapid changes in emotion which may mediate responses. In addition, questionnaires allow for empathic responding to be measured over a much broader range of situations and Eisenberg and Miller suggested this larger sampling of situations improves the stability of estimates of empathic responding.

Eisenberg and Miller (1987) also found that particular methods of measurement have been restricted to participants from a limited age range. For example, picture/story measures and facial/gestural responses have been used almost exclusively with very young and primary school children whilst experimental procedures and self-report questionnaires have been primarily used with older children, adolescents and adults (Miller & Eisenberg, 1988).

The differing definitions of empathy have also impacted on the development of an adequate measure of empathy. Earlier measures typically viewed empathy either as the ability to take on another's perspective (e.g., the Hogan Empathy Scale), or the ability to vicariously experience another's feelings (e.g., the Questionnaire Measure of Emotional Empathy) (Chlopan et al., 1985). However, very few measures examined a combination of both components.

In 1980, Davis (cited in Garton & Gringart, 2005) took a multidimensional approach to the measurement of empathy with the development of the Interpersonal Reactivity Index (IRI). The IRI is a self-reporting 28-item questionnaire which reflects both cognitive and affective components of empathy through examining Perspective Taking, Fantasy, Empathic Concern and Personal Distress. The IRI has become a popular measure of empathy in research (Cohen & Strayer, 1996;

Giancola, 2003) and has since been adapted by authors for use with children. For example, Litvack-Miller et al. (1997) reworded items of the IRI for use with first grade children, however the authors expressed concern with the scale regarding the reliability of the factors due to the small size of the Fantasy and Empathic Concern scales. The IRI was also adapted by Garton and Gringart into a paper and pencil self-report scale. The new measure was developed based on responses from 413 school children aged 8 and 9 years. The resulting measure, the Feeling and Thinking (F&T) scale, is a 12 item, two-factor scale, aimed at measuring both cognitive and affective components of empathy with children. However, to date, this scale has not been validated in the research.

Empathy Training

Empathy training programmes for children have tended to focus on role-taking or perspective-taking skills (Feshbach, 1997). In a review of research examining the ability of empathy training to reduce aggressive behaviour and improve social interactions with others, Miller and Eisenberg (1988) found that the results of empathy training programmes which aim to enhance cognitive problem-solving and perspective-taking skills have been inconsistent. Miller and Eisenberg suggested that one reason for the inconsistent results may be that in order to reduce aggressive or antisocial behaviour towards others, enhancement of the affective component of empathy is necessary.

Summary

Higher empathy levels have been associated with pro-social behaviour and lower aggression, however, little research has directly examined the relationship between aggression or bullying and empathy. With an increase in empathy based research, the definition of empathy has become more specific with recognition of the

need to include both cognitive and affective components. However, this has only recently begun to be transferred into research and empathy measures. Furthermore, the distinction between the components in research is rarely made, though early research in this area has suggested that affective empathy may moderate aggression. Measurement techniques have been varied across the research with several concerns being raised over commonly used methods. Self-report questionnaires examining both components of empathy are suggested to offer the most reliable data. Finally, interventions have primarily focussed on cognitive-based skills and these have shown inconsistent results.

Gender

Gender differences may also affect the relationship between empathy and bullying. One of the most consistent findings in the research literature is that males are more aggressive than females (Crick & Grotpeter, 1995; Hanish et al., 2004; Rushton, Fulker, Neale, Nias, & Eysenck, 1986; Schultz et al., 2004; Strayer & Roberts, 2004), and numerous reports have suggested that males express less empathy than females (Hastings et al., 2000; Koestner, Franz, & Weinberger, 1990; Strayer & Roberts).

Gender and Bullying

Literature on bullying has tended to support findings of gender and aggression research, with boys more often involved in bullying than girls (Kumpulainen et al., 1999; Natvig, Albrektsen, & Qvarnström, 2001; Perren & Alsaker, 2006; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996; Sutton & Smith, 1999). However, once again the results differed with the role played in bullying experiences. For example, Forero et al. (1999) found that more boys reported bullying others than girls, and being bully/victims however, slightly

more girls than boys reported being bullied. Veenstra et al. (2005) found similar results among 2,230 Dutch school children using peer nominations. They found that boys were almost 2.5 times more likely to be bullies or bully/victims than girls, and girls were 1.74 times more likely to be victims. However, some research has found that boys are more likely to bully than girls, but are just as likely to be victims of bullying as girls (Eslea & Mukhtar, 2000; Scheithauer et al., 2006).

Gender has also been associated with type of bullying (direct or indirect).

Numerous studies have suggested that as victims, boys are more likely to be subjected to direct methods of bullying (Bonica et al., 2003; Carney & Merrell, 2001; Scheithauer et al., 2006) whereas girls were subjected to more indirect methods (Crick & Grotpeter, 1995; Frey et al., 2005). Additionally, as bullies, boys are more likely to use direct physical methods of bullying (Baldry, 2004; Rivers & Smith, 1994) and girls are more likely to use indirect methods (Bonica et al.).

Gender and Empathy

Gender and empathy has also been the focus of recent research and although numerous reports, over a wide range of ages, have found that females generally express more empathy than males (Cohen & Strayer, 1996; Niec & Russ, 2002; Rushton et al., 1986), results have been varied. This variation is possibly due to the differences in definition and type of empathy measured. For example, using a combination of sympathy and affective empathy questions, Schultz et al. (2004) found no significant gender differences for empathy, whilst Strayer and Roberts (2004) found higher levels of empathy for girls when observation and questionnaires were used.

Research has also attempted to explore gender differences in the different components of empathy but, once again, the results have been varied. Research by

Cohen and Strayer (1996) found that girls scored higher on empathy than boys but these differences were not present on cognitive scales, suggesting affective empathy was primarily responsible for gender differences. Likewise, Olweus and Endresen (1998) administered self-report questionnaires to 2286 Norwegian schoolchildren aged 13 to 16 years and found that girls scored higher than boys on Empathic Responsiveness and Empathic Distress measures, both of which are concerned with the affective component of empathy. However, using an adaptation of the IRI for Canadian primary school children, Litvack-Miller et al. (1997) found that girls had significantly higher scores on measures of Personal Distress, Empathic Concern and Perspective Taking, suggesting that both cognitive and affective empathy were higher for girls than boys.

Summary

Gender has been associated with both empathy and involvement in bullying and victimisation. Research has found that boys are more likely to be involved as bullies and bully/victims than girls but research has shown inconsistent results in regard to the role of victim. In addition, boys are more likely to use, and be the subject of, direct forms of bullying whilst girls are more likely to be involved in indirect bullying. The research examining gender and empathy has also shown inconsistent results. However, research generally suggests that females have higher levels of empathy than males and this may be due to differences in the affective component of empathy.

Conclusions

Bullying and victimisation, and empathy have been the subject of much research in recent years, and as such, have undergone rapid development in definitional issues and subject knowledge. This review sought to present current

knowledge and research issues in the areas of bullying and empathy, as well as examine the suggested relationship between them. In addition, the influence of gender was also considered.

Overall, the definition and measurement of bullying has broadened from a 'physical' perspective to include verbal and indirect bullying behaviours. Classification of bullying roles has also become more specific with recent research tending to classify children in roles of bully, victim, bully/victim, and not involved. By including all four categories, future research can produce results which can be used in a whole-school approach to reduce bullying and its harmful effects. In addition, the bullying experience is different for children in different roles, for example, bully/victims are at greater risk of a number of psychological and social problems, and therefore it is important to distinguish between the roles in future research.

Most children will experience bullying either directly or indirectly during their school years. Reported prevalence rates vary greatly between studies, and in many cases the variation is likely to be a factor of methodological differences rather than real differences. With the development of specific definitions, measures which recognise indirect bullying, inclusion of the bully/victim role in classifications, and less variation in reporting time-frames, reported prevalence rates are beginning to gain some consistency. However, research that addresses all these inconsistencies is rare at present. In order to gain useful, comparative data, researchers need to minimise methodological discrepancies in future studies.

Bullying interventions have generally had low to moderate success in reducing bullying and victimisation. Increasing children's ability to empathise is one strategy employed to decrease bullying behaviour. This would appear to be a sound

assumption based on research findings that aggressive behaviour is associated with lower empathy levels. Although research incorporating both cognitive and affective components of empathy has revealed that overall, empathy is negatively correlated with aggression (Kaukiainen et al., 1999), early research separating these components has suggested that this difference may be attributed to affective but not cognitive empathy (Shechtman, 2002). This has important implications for the development of bullying interventions, particularly considering that bullying interventions primarily attempt to develop cognitive empathy skills, such as perspective taking, and these interventions have been relatively ineffective in reducing the proportion of students who bully others.

Research regarding the empathy/aggression relationship is in its infancy and methodological concerns with the currently published studies limit confidence in the results and interpretations. Future research to explore the empathy/bullying relationship, with particular emphasis on separating cognitive and affective empathy influences, would better inform development of interventions. However, before this can occur, an effective method of measuring, and distinguishing between, cognitive and affective empathy in children needs to be established. Self-report questionnaire measures are suggested to produce reliable data in empathy measurement however they have rarely been used with children and current adaptations of adult scales require validation in the research literature.

In conclusion, given that interventions for aggression and bullying tend to focus on raising cognitive empathy, and have shown inconsistent results, the need to conduct methodologically sound research to examine the empathy/bullying relationship, including consideration of empathy type and bullying role, is required to enhance the potential effectiveness of bullying interventions, and consequently

reduce psychological and psychosomatic health issues. In addition, due to having a relationship with both empathy and aggression, it is important to include gender in research investigating these areas.

References

- Baldry, A. C. (2004). The impact of direct and indirect bullying on the mental and physical health of Italian youngsters. *Aggressive Behavior*, 30, 343-355.
- Björkqvist, K., Lagerspetz, K., & Kaukiainen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behavior*, 18, 117-127.
- Björkqvist, K., Österman, K., & Kaukiainen, A. (2000). Social intelligence - empathy = aggression? *Aggression and Violent Behavior*, 5(2), 191-200.
- Bohart, A. C., & Greenberg, L. S. (1997). Empathy and psychotherapy: An introductory overview. In A. C. Bohart & L. S. Greenberg (Eds.), *Empathy reconsidered: New directions in psychotherapy* (pp. 3-31). Washington D.C.: American Psychological Association.
- Bonica, C., Arnold, D. H., Fisher, P. H., Zeljo, A., & Yershova, K. (2003). Relational aggression, relational victimization, and language development in preschoolers. *Social Development*, 12, 551-562.
- Camodeca, M., Goossens, F. A., Meerum Terwogt, M., & Schuengel, C. (2002). Bullying and victimization among school-age children: Stability and links to proactive and reactive aggression. *Social Development*, 11, 332-345.
- Carney, A. G., & Merrell, K. W. (2001). Bullying in schools: Perspectives on understanding and preventing an international problem. *School Psychology International*, 22, 364-382.
- Charach, A., Pepler, D., & Ziegler, S. (1995). Bullying at school: A Canadian perspective. *Education Canada*, 35(1), 12-18.
- Chlopan, B. E., McCain, M. L., Carbonell, J. L., & Hagen, R. L. (1985). Empathy: Review of available measures. *Journal of Personality and Social Psychology*,

48, 635-653.

- Cohen, D., & Strayer, J. (1996). Empathy in conduct-disordered and comparison youth. *Developmental Psychology*, 32, 988-998.
- Cotton, K. (2001). Developing empathy in children and youth. *School Improvement Research Series Close Up # 13*. Retrieved 10 March, 2006, from <http://www.nwrel.org/scpd/sirs/7/cu13.html>
- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development*, 66, 710-722.
- Eagly, A. H., & Steffen, V. J. (1986). Gender and aggressive behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin*, 100, 309-330.
- Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, 101, 91-119.
- Eisenberg, N., Murphy, B. C., & Shepard, S. (1997). The development of empathic accuracy. In W. Ickes (Ed.), *Empathic Accuracy* (pp. 73-116). New York: Guilford Press.
- Eslea, M., & Mukhtar, K. (2000). Bullying and racism among Asian schoolchildren in Britain. *Educational Research*, 42, 207-217.
- Feshbach, N. D. (1997). Empathy, the formative years: Implications for clinical practice. In A. C. Bohart & L. S. Greenberg (Eds.), *Empathy reconsidered: New directions in psychotherapy* (pp. 33-59). Washington, D.C.: American Psychological Association.
- Forero, R., McLellan, L., Rissel, C., & Bauman, A. (1999). Bullying behaviour and psychosocial health among school students in New South Wales, Australia: Cross sectional survey. *British Medical Journal*, 319, 344-348.

- Frey, K. S., Hirschstein, M. K., Snell, J. L., Edstrom, L. V., MacKenzie, E. P., & Broderick, C. J. (2005). Reducing playground bullying and supporting beliefs: An experimental trial of the Steps to Respect program. *Developmental Psychology, 41*, 479-491.
- Garton, A. F., & Gringart, E. (2005). The development of a scale to measure empathy in 8- and 9-year old children. *Australian Journal of Education and Developmental Psychology, 5*, 17-25.
- Giancola, P. R. (2003). The moderating effects of dispositional empathy on alcohol-related aggression in men and women. *Journal of Abnormal Psychology, 112*, 275-281.
- Griffin, R. S., & Gross, A. M. (2004). Childhood bullying: Current empirical findings and future directions for research. *Aggression and Violent Behavior, 9*, 379-400.
- Grossman, D. C., Neckerman, H. J., Koepsell, T. D., Liu, P.-Y., Asher, K. N., Beland, K., et al. (1997). Effectiveness of a violence prevention curriculum among children in elementary school: A randomised controlled trial. *JAMA, 277*, 1605-1611.
- Hanish, L. D., Eisenberg, N., Fabes, R. A., Spinrad, T. L., Ryan, P., & Schmidt, S. (2004). The expression and regulation of negative emotions: Risk factors for young children's peer victimisation. *Development and Psychopathology, 16*, 335-353.
- Hastings, P. D., Zahn-Waxler, C., Robinson, J., Usher, B., & Bridges, D. (2000). The development of concern for others in children with behavior problems. *Developmental Psychology, 36*, 531-546.
- Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer

victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, 41, 441-455.

Hodges, E. V. E., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental Psychology*, 33, 1032-1039.

Hoffman, M. L. (2000). *Empathy and moral development*. Cambridge: Cambridge University Press.

International Network on School Bullying and Violence. (2005). *National Policy - Australia*. Retrieved 4 February, 2006, from <http://oecd-sbv.net/Templates/Article.aspx?id=262>

Juvonen, J., & Graham, S. (2004). Research-based interventions on bullying. In C. E. Sanders & G. D. Phye (Eds.), *Bullying: Implications for the classroom* (pp. 229-255). San Diego: Elsevier Academic Press.

Karatzias, A., Power, K. G., & Swanson, V. (2002). Bullying and victimization in Scottish secondary schools: Same or separate entities? *Aggressive Behavior*, 28, 45-61.

Kaukiainen, A., Björkqvist, K., Lagerspetz, K., Österman, K., Salmivalli, C., Rothberg, S., et al. (1999). The relationships between social intelligence, empathy, and three types of aggression. *Aggressive Behavior*, 25, 81-89.

Koestner, R., Franz, C., & Weinberger, J. (1990). The family origins of empathic concern: A 26-year longitudinal study. *Journal of Personality and Social Psychology*, 58, 709-717.

Kumpulainen, K., Räsänen, E., & Henttonen, I. (1999). Children involved in bullying: Psychological disturbance and the persistence of the involvement.

- Child Abuse and Neglect: The International Journal*, 23, 1253-1262.
- Li, Q. (2006). Cyberbullying in schools: A research of gender differences. *School Psychology International*, 27, 157-170.
- Litvack-Miller, W., McDougall, D., & Romney, D. M. (1997). The structure of empathy during middle childhood and its relationship to prosocial behaviour. *Genetic, Social and General Psychology Monographs*, 123, 303-325.
- Miller, P. A., & Eisenberg, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin*, 103, 324-344.
- Natvig, G. K., Albrektsen, G., & Qvarnström, U. (2001). School-related stress experience as a risk factor for bullying behavior. *Journal of Youth and Adolescence*, 30, 561-575.
- Niec, L. N., & Russ, S. W. (2002). Children's internal representations, empathy, and fantasy play: A validity study of the SCORS-Q. *Psychological Assessment*, 14, 331-338.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford: Blackwell Publishers.
- Olweus, D., & Endresen, I. M. (1998). The importance of sex-of-stimulus object: Age trends and sex differences in empathic responsiveness. *Social Development*, 7, 370-388.
- O'Moore, A. M., & Minton, S. J. (2005). Evaluation of the effectiveness of an anti-bullying programme in primary schools. *Aggressive Behavior*, 31, 609-622.
- Perren, S., & Alsaker, F. D. (2006). Social behavior and peer relationships of victims, bully-victims, and bullies in kindergarten. *Journal of Child Psychology and Psychiatry*, 47, 45-57.
- Perry, D. G., Kusel, S. J., & Perry, L. C. (1988). Victims of peer aggression.

Developmental Psychology, 24, 807-814.

Rigby, K. (1996). *Bullying in schools: And what to do about it*. Melbourne: The Australian Council for Educational Research Ltd.

Rigby, K. (1997). What children tell us about bullying in schools. *Children Australia*, 22(2), 28-34.

Rigby, K. (1998a). Peer relations at school and the health of adolescents. *Youth Studies Australia*, 17, 13-17.

Rigby, K. (1998b). Suicidal ideation and bullying among Australian secondary school students. *Australian Educational and Developmental Psychologist*, 15, 45-61.

Rigby, K. (2002). *A meta-evaluation of methods and approaches to reducing bullying in pre-schools and early primary school in Australia*. Barton, ACT: Commonwealth Attorney-General's Department.

Rigby, K. (2004). Addressing bullying in schools: Theoretical perspectives and their implications. *School Psychology International*, 25, 287-300.

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

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

Rushton, J. P., Fulker, D. W., Neale, M. C., Nias, D. K. B., & Eysenck, H. J. (1986). Altruism and aggression: The heritability of individual differences. *Journal of Personality and Social Psychology*, 50, 1192-1198.

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, 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.
- Salmivalli, C., & Nieminen, E. (2002). Proactive and reactive aggression among school bullies, victims, and bully-victims. *Aggressive Behavior*, 28, 30-44.
- Salmon, G., & West, A. (2000). Physical and mental health issues related to bullying in schools. *Current Opinion in Psychiatry*, 13, 375-380.
- Sanders, C. E. (2004). What is bullying? In C. E. Sanders & G. D. Phye (Eds.), *Bullying: Implications for the classroom* (pp. 1-18). San Diego: Elsevier Academic Press.
- Scheithauer, H., Hayer, T., Petermann, F., & Jugert, G. (2006). Physical, verbal, and relational forms of bullying among German students: Age trends, gender differences, and correlates. *Aggressive Behavior*, 32, 261-275.
- Schultz, D., Izard, C., E., & Bear, G. (2004). Children's emotion processing: Relations to emotionality and aggression. *Development and Psychopathology*, 16, 371-387.
- Shechtman, Z. (2002). Cognitive and affective empathy in aggressive boys: Implications for counseling. *International Journal for the Advancement of Counselling*, 24, 211-222.
- Smith, P. K. (2004). Bullying: Recent developments. *Child and Adolescent Mental Health*, 9(3), 98-103.
- Smith, P. K., & Brain, P. (2000). Bullying in schools: Lessons from two decades of research. *Aggressive Behavior*, 26, 1-9.
- Smith, P. K., Talamelli, L., Cowie, H., Naylor, P., & Chauhan, P. (2004). Profiles of non-victims, escaped victims, continuing victims and new victims of school bullying. *British Journal of Educational Psychology*, 74, 565-581.
- Strayer, J., & Roberts, W. (2004). Empathy and observed anger and aggression in

five-year-olds. *Social Development*, 13, 1-13.

Sutton, J., & Smith, P. K. (1999). Bullying as a group process: An adaptation of the participant role approach. *Aggressive Behavior*, 25, 97-111.

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

Unnever, J. D. (2005). Bullies, aggressive victims, and victims: Are they distinct groups? *Aggressive Behavior*, 31, 153-171.

van der Wal, M. F., de Wit, C. A. M., & Hirasing, R. A. (2003). Psychosocial health among young victims and offenders of direct and indirect bullying. *Pediatrics*, 111, 1312-1317.

Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2005). Bullying and victimization in elementary schools: A comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental Psychology*, 41, 672-682.

Williams, K., Chambers, M., Logan, S., & Robinson, D. (1996). Association of common health symptoms with bullying in primary school children. *British Medical Journal*, 313, 17-19.

Wolke, D., Woods, S., Bloomfield, L., & Karstadt, L. (2001). Bullying involvement in primary school and common health problems. *Archives of Disease in Childhood*, 85, 197-201.

Yang, S.-J., Kim, J.-M., Kim, S.-W., Shin, I.-S., & Yoon, J.-S. (2006). Bullying and victimization behaviors in boys and girls at South Korean primary schools. *Journal of the American Academy of Child and Adolescent Psychiatry*, 45, 69-77.

Nominated Journal

The literature review is aimed at being suitable for publication in an APA Journal.

Guidelines to authors request that formatting is in accordance with the Publication Manual of the American Psychological Association (5th ed.).

Running head: BULLYING AND VICTIMISATION, EMPATHY AND GENDER

Bullying and Victimization in Primary Schools: Relations between

Bully Status, Empathy, and Gender

Teresa B. Sapienza

Edith Cowan University

Abstract

Research examining the bullying/empathy relationship, and the separate components of empathy is limited. This research investigated relations between bullying, empathy and gender, and validity of the Feeling and Thinking (F&T) measure. The sample comprised 241 children (130 boys and 111 girls) in Grades 4 to 6 from 3 Perth schools. Self-report surveys, including questions from the Peer Relations Questionnaire to examine bullying and victimisation, and the F&T to examine empathy, were completed anonymously in class groups. Results indicated bully/victims had lower levels of empathy than victims and not involved students. This difference was apparent for affective but not cognitive empathy. Girls had higher levels of both cognitive and affective empathy than boys. Factor analysis did not support the two-factor solution of the F&T, but validity of the F&T as an overall measure of empathy was supported by results consistent with previous research. Despite limitations, results suggest that bullying interventions may benefit from including affective empathy-raising strategies. Overall, developing a measure to clearly distinguish between affective and cognitive empathy, and further research to clarify and expand on these findings is required.

Key Words: Bullying, Empathy, Gender, Cognitive Empathy, Affective Empathy

Author: Teresa B Sapienza

Supervisor: Professor Alison Garton

Submitted: October, 2006

Bullying and Victimization in Primary Schools: Relations between Bully Status, Empathy, and Gender

Introduction

Over the previous 15-20 years, increased research into bullying and victimisation has led to greater awareness of the adverse effects associated with bullying in schools. As this awareness has increased, schools have begun to implement programmes to reduce the prevalence of bullying and victimisation. Increasing children's ability to empathise has been one strategy employed as part of intervention programmes to decrease bullying behaviour. The inclusion of empathy-raising strategies is based on consistent findings that aggressive behaviour is associated with low levels of empathy (Cohen & Strayer, 1996; Kaukiainen et al., 1999; Schultz, Izard, & Bear, 2004; Strayer & Roberts, 2004) and the assumption that aggression underlies bullying behaviour. However, the dynamics of the bullying/empathy relationship have been relatively untested in research.

Bullying and Victimization

In the past, bullying was primarily defined as direct physical and verbal attacks. Although some research still examines aggression based solely on direct methods (e.g., Hodges, Malone, & Perry, 1997), in recent years the definition of bullying has been broadened to include indirect or relational bullying. Direct bullying involves explicit aggression from the bully toward the victim (Sanders, 2004), whereas indirect bullying harms others through damage to relationships (Bonica, Arnold, Fisher, Zeljo, & Yershova, 2003), such as exclusion and rumour spreading (Olweus, 1993; van der Wal, de Wit, & Hirasing, 2003).

The most commonly cited definition of bullying in current literature states "...a student is being bullied or victimized when he is exposed repeatedly and over

time to negative actions on the part of one or more other students” (Olweus, 1993, p.9). This definition involves two main components, the repeated nature of the bullying, and the actions are negative. In this definition, the ‘repetition’ component excludes single negative events from being classed as bullying, and the ‘negative actions’ component allows for a wide variety of behaviours to be classed as bullying, including direct and indirect methods. More recent research has also tended to include the imbalance of power between the bully and victim within the definition (Rigby, 1996).

Research has shown that involvement in bullying and victimisation is associated with increased psychological, psychosomatic and behavioural symptoms, for example, low self-esteem (Hawker & Boulton, 2000; Karatzias, Power, & Swanson, 2002); increased anxiety (Baldry, 2004); headaches and stomach aches (Williams, Chambers, Logan, & Robinson, 1996); depression (Crick & Grotpeter, 1995; Yang, Kim, Kim, Shin, & Yoon, 2006); and suicidal ideation (Rigby, 1998b; van der Wal et al., 2003). These negative effects are apparent for both bullies and victims, and longitudinal research has suggested these symptoms can persist into adolescence and adulthood (Olweus, 1993; Rigby, 1998a).

Bullying occurs in most school environments and research has found that 49% of children experience some form of bullying at least once or twice per term (Charach, Pepler, & Ziegler, 1995). Australian research has found that approximately 1 in 4 children is involved in bullying others on a regular basis (Forero, McLellan, Rissel, & Bauman, 1999), whilst 1 in 6 children is the victim of bullying on a weekly basis (Rigby, 1997).

Despite many schools adopting some form of anti-bullying campaign over the previous 10-15 years (Rigby, 2002), the prevalence of bullying and victimisation

remains high (Rigby, 2004). Although some intervention programmes have reported reductions in victimisation of up to 50% (Olweus, 1993; O'Moore & Minton, 2005), the majority of programmes have had considerably lower levels of success (Grossman et al., 1997). Following a review of bullying intervention research, Rigby (2004) concluded that there was no consistent evidence that interventions have had more than modest success in reducing victimisation and little or no effect in reducing the number of children who bully others.

In research, the most common methods of measuring bullying and victimisation have been teacher reports, peer nominations, and student self-reports. Reviews examining the effectiveness of methods for measuring bullying and victimisation have suggested that although peer nominations and teacher reports offer objectivity which may be lacking in self-reports (Rigby, 1998a), they are also less likely to capture the true extent of indirect bullying as this is often hidden to all except those who are personally involved (Baldry, 2004). The majority of large-scale surveys tend to rely on student self-report questionnaires (Smith, 2004) in which children usually answer questions about the type and frequency of bullying and victimisation they have been involved in. Although self-reports can lead to inaccurate data, due to students being reluctant to disclose their involvement, Rigby (1996) suggested that by having the students complete the questionnaires anonymously, they are likely to give accurate information.

Another development in recent bullying research involves the roles of students in bullying and victimisation. Earlier research tended to classify participants simply as bullies and victims, however researchers began to recognise that some children fit into both categories. Consequently, recent research has tended to include four common bully classifications; those who bully others (bullies), those

who are victimised (victims), those who bully others and are also victimised themselves (bully/victims), and those who are not bullies or victims (not-involved) (e.g., Camodeca, Goossens, Meerum Terwogt, & Schuengel, 2002; Perren & Alsaker, 2006; Salmivalli & Nieminen, 2002; Veenstra et al., 2005).

Salmivalli and Nieminen (2002) suggested that it is important for researchers to distinguish between bullies, victims and bully/victims because bully/victims differ from both bullies and victims in several respects. For example, Smith, Talamelli, Cowie, Naylor, and Chauhan (2004) found that bully/victims were more likely to be victimised over an extended period of time than pure victims, and Veenstra et al. (2005) reported that bully/victims were more likely to be isolated by their peers than pure bullies. Based on these differences, treating bully/victims as either victims or bullies is likely to distort research findings and interpretations, and also likely to result in important information for the development of effective intervention strategies to be overlooked.

Empathy

Until recently, empathy research has tended to use measures which examine either cognitive (perspective-taking), or affective (emotional arousal) empathy (Braaten & Rosen, 2000; Chlopan, McCain, Carbonell, & Hagen, 1985). The cognitive component refers to an individual's ability to identify affective cues in others and take on the perspective of others (Shechtman, 2002), whereas affective empathy refers to the arousal of emotion in response to another person's affective state (Feshbach, 1997). More recent literature has suggested the need for consideration of both perspectives of empathy to be included to gain an accurate measure of empathy (Cohen & Strayer, 1996; Cotton, 2001; Eisenberg, Murphy, & Shepard, 1997; Kaukiainen et al., 1999). However, whilst recent research has tended

to include both components of empathy, distinction between them is rarely made and the difference between the two has rarely been investigated. However, one study by Shechtman (2002) did distinguish between the two components. Shechtman compared 25 aggressive boys to 27 non-aggressive boys and found that aggressive boys showed similar levels of cognitive empathy to non-aggressive boys but the latter group showed double the levels of affective empathy.

In a review of research Miller and Eisenberg (1988) found that empathy training programmes, including bullying interventions, have been focused on enhancing cognitive problem-solving and perspective-taking skills rather than affective empathy. They reported that the results of these programmes have been inconsistent. Miller and Eisenberg suggested that one reason for the inconsistent results may be that, in order to reduce aggressive or antisocial behaviour towards others, enhancement of the affective component of empathy is necessary. However, in order to examine this hypothesis in regard to bullying, a measure which examines both components of empathy, developed for administration to children, would be required.

To date, measuring empathy in children has primarily been restricted to the use of picture/story measures (Litvack-Miller, McDougall, & Romney, 1997). However, Eisenberg and Miller (1987) suggested that questionnaire methods allow for empathic responding to be measured over a broader range of situations and this is likely to improve the stability of empathy estimates. In reviews of empathy literature, Miller and Eisenberg (1988) and Eisenberg and Miller found that, unlike picture/story measures, questionnaire methods produced consistent results in regard to empathy's relationships with prosocial and aggressive behaviours.

Of the available survey-type empathy measures, the majority are directed

toward measurement of the cognitive aspects of empathy (e.g., the Hogan Empathy Scale), although one popular measure, the Questionnaire Measure of Emotional Empathy (QMEE), examines the affective aspect of empathy (Chlopan et al., 1985). Despite general consensus that empathy involves both cognitive and affective aspects, very few measures have included both components. However, in 1980, Davis (cited in Garton & Gringart, 2005) took a multidimensional approach to measuring empathy with the development of the Interpersonal Reactivity Index (IRI). The IRI is a self-reporting 28 item questionnaire which reflects both cognitive and affective components of empathy through examining Perspective Taking, Fantasy, Empathic Concern and Personal Distress. Although the IRI has become a popular measure of empathy in research (e.g., Cohen & Strayer, 1996; Giancola, 2003), the scale was developed for use with adults and is not appropriate for research with children (Garton & Gringart).

Questionnaires that are suitable for use with children are limited. Although the Bryant Empathy Scale (Bryant, 1982) was designed for use with children and has been widely used in research, it primarily contains measures of affective empathy. However, Garton and Gringart (2005) have recently adapted the IRI into a paper and pencil self-report scale based on responses from 413 children aged 7 to 11 years. The resulting measure, the Feeling and Thinking (F&T) scale, is a 12 item scale, aimed at measuring both cognitive and affective empathy, though it has not yet been validated in the research literature.

Gender

Gender differences may also influence the relationship between empathy and bullying. One of the most consistent findings in research literature is that males are more aggressive than females (Crick & Grotpeter, 1995; Hanish et al., 2004; Schultz

et al., 2004) and bullying literature has tended to support these findings with boys more often involved as bullies than girls (Natvig, Albrektsen, & Qvarnström, 2001; Perren & Alsaker, 2006). However, research results have varied with some researchers finding that boys are involved in both bully and victim roles more often than girls (Kumpulainen, Räsänen, & Henttonen, 1999; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996; Sutton & Smith, 1999), while others have found no gender difference for victims (Charach et al., 1995; Eslea & Mukhtar, 2000; Li, 2006; Scheithauer, Hayer, Petermann, & Jugert, 2006; Yang et al., 2006), and some have found that girls were more likely to be victims (Forero et al., 1999; Veenstra et al., 2005). Research has also found that boys are more likely to be bully/victims than girls (Forero et al.; Veenstra et al.; Yang et al.).

In addition, numerous reports have suggested that males express less empathy than females (Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000; Koestner, Franz, & Weinberger, 1990; Niec & Russ, 2002; Strayer & Roberts, 2004). A small number of researchers have attempted to explore gender differences for the different components of empathy but results have been varied. For example, research by Cohen and Strayer (1996) found that girls scored higher on empathy than boys however, differences were not present on cognitive scales, suggesting that affective empathy was primarily responsible for gender differences. Contrary to this, Litvack-Miller et al. (1997) found that girls had significantly higher scores on measures of Personal Distress, Empathic Concern, and Perspective Taking, suggesting that both cognitive and affective empathy were higher for girls than boys.

Summary

In sum, despite the introduction of intervention programmes, most children will experience bullying either directly or indirectly during their school years. Given

that interventions for aggression (including bullying) tend to focus on raising cognitive empathy, and have shown inconsistent results (Miller & Eisenberg, 1988), the need to examine how empathy type differs in relation to bully status is required in order to enhance the potential effectiveness of bullying interventions, and consequently reduce psychological and psychosomatic health issues. However, in order to achieve this, an effective measure for examining cognitive and affective empathy in children is required. Additionally, due to having a relationship with both empathy and aggression, it is important to include gender in research investigating these areas.

Research Questions

The purpose of the present research is twofold: first, to investigate the relations between bully status, empathy, and gender, and second; to investigate the validity of Garton and Gringart's (2005) newly developed F&T scale. Therefore, the following research questions were generated:

1. Does a child's level of empathy differ on the basis of their role in bullying and/or their gender?
2. Do cognitive and/or affective empathy levels differ on the basis of a child's role in bullying and/or their gender?
3. Do the research findings provide support for the Feeling & Thinking scale as a valid measure of empathy?

Method

Participants

The participant sample consisted of 242 students from grades four to six (aged from 8 to 11 years). The students attended one of three schools in the southern suburbs of Perth Metropolitan Area in Western Australia. One questionnaire was

omitted from analysis due to multiple answers given on the F&T, resulting in the final sample being 241 students. The final sample consisted of 130 male students (54%) and 111 female students (46%). The schools were selected on the basis of their availability and willingness to participate, and participation for students was voluntary.

Materials

An information sheet outlining the research (Appendix A) and consent form (Appendix B) were distributed to parents of all grade four, five and six children in the three participating schools. School Principals and teachers were also provided with an information sheet (Appendix C).

At data collection, children were provided with information and instructions regarding the completion of the questionnaire (Appendix D), and a current definition of bullying (Appendix E). Providing a definition and examples of bullying is recommended for research as past variations in bullying prevalence have been due, in part, to differences in perceptions of what constitutes bullying (Juvonen & Graham, 2004; Smith, 2004).

Bullying and victimisation was examined using a self-report questionnaire (Appendix F) containing six questions adapted from the Peer Relations Questionnaire (PRQ; Rigby & Slee, 1998). Four questions examined the general frequency of bullying and victimisation and two examined specific behaviours. For example, "Did any of the following things happen to you this year?..." followed by statements such as "Getting teased or made fun of in a hurtful way". The children responded to the specific statements by circling "Never", "Sometimes", or "Often". Permission to adapt and use these questions, and advice on question construction, was provided by Dr. Ken Rigby. The PRQ was normed in Australia using data from

over 30,000 children aged 8-18 years. The PRQ, and adaptations of it, have been used extensively in research (e.g., O'Moore & Minton, 2005; Salmivalli & Nieminen, 2002). In addition, three questions to record students' gender, age and grade were included in the bullying questionnaire.

Empathy was measured using the Feeling and Thinking (F&T) scale (Garton & Gringart, 2005) (Appendix G). The F&T is a self-reporting questionnaire for children, adapted from Davis's Interpersonal Reactivity Index (IRI). The questionnaire contains 12 empathy-related statements (e.g., "I often worry about people that are not as lucky as me, and feel sorry for them"), on which a child responds on a scale ranging from 1 (*not like me at all*) to 5 (*very like me*). The scale measures both cognitive and affective empathy and has a robust factor structure (Garton & Gringart). To date, this scale has not been used in research and therefore validity is yet to be established.

Self-report measures were used as they have been shown to be effective and reliable in assessing both empathy and bullying (Chlopan et al., 1985; Rigby, 1998b). Although self-report measures can be susceptible to social desirability bias, when administered anonymously they provide accurate and consistent results (Rigby, 1996) and are the most effective method of measuring indirect bullying (Griffin & Gross, 2004). In addition, Eisenberg and Miller (1987) suggested that self-report questionnaires have the benefit of being able to measure over a broader range of situations and behaviours.

Procedure

Students who had returned consent forms were identified and, following the procedure suggested by Rigby (1996), the questionnaires were administered in the students regular classrooms; no names were required on the questionnaires; and

students were assured that the information provided could not be traced back to them. Students were given verbal and written instructions regarding the completion of the questionnaire, and a verbal and written definition of bullying.

The bullying and empathy questionnaires were presented together. These were completed under the supervision of the student researcher and assistance was provided to the participants as required.

The research was conducted in Term 2 of the school year to ensure the children had sufficient time to establish social patterns for the new school year. Additionally, this allowed for a defined time-period of answering which could be easily recalled by the participants. Such a restricted time-period is recommended in current literature as it is easier for children to remember what has happened in the current school year rather than 'the previous 12 months' (Olweus, 1993; Unnever, 2005). In turn, this is likely to result in more reliable responses.

Bully Status Classification

Students were given a classification of either bully, victim, bully/victim or not involved, based on reported frequency of involvement in bullying. In recent research, a frequency cut-off point of 'once a week' is commonly used to avoid exaggerating the frequency of bullying and victimisation (Olweus, 1993). However, a high number of incongruent answers were apparent in the present study, for example, a large number of students indicated they had "often" been the target of specific behaviours however they reported "never" being bullied. These inconsistencies were primarily due to the format of the questionnaire in which the statements examining specific behaviours were continued over to a new page and the frequency question of "How often has one or more of the above things happened to you this year?..." was then presented with only the final section of the specific

questions 'above' it. This explanation was supported by the large number of participant queries regarding the frequency question. Similarly, Scheithauer et al. (2006) found a large number of incongruent responses in their research and suggested that the recommended cut-off point excludes many bullies and victims by not taking the responses to specific questions into consideration. Therefore, they included responses of 'often' to specific behaviours as automatic classification in the bully or victim status. As the additional classification did not result in highly inflated bully (12.1%) and victim (11.1%) prevalence rates in Scheithauer et al.'s research, it was incorporated into the current research. In addition, due to the relatively short reporting time-frame, if a student answered "sometimes" to three or more specific behaviours, this was also considered sufficient for bully or victim classification. This classification system remains consistent with bullying definitions as it still emphasises the repetitive nature of bullying and excludes singular events.

Using the adapted classification system, for a student to be classified as a victim they must have indicated that they were the target of bullying activities "about once a week" or more often on Question 6. Additionally, those who responded to at least one statement with "often", and/or at least three statements with "sometimes" from Question 5 were also classified as victims. For a student to be classified as a bully they must have indicated that they took part in bullying activities "about once a week" or more often on Question 9. Additionally, bully classification was given to students who responded to at least three statements from Question 8 with "sometimes", and/or at least one statement with "often". For a student to be classified as a bully/victim they must have qualified for classification as both bully and victim on the above criteria. All remaining children were classified as not involved.

Results

All analyses were performed using SPSS Version 14 for Windows.

Data Screening

Prior to analysis, data were screened to examine data entry accuracy, missing values, and normality. Screening of overall empathy by groups (bully status and gender) revealed minimal skewness and kurtosis deviations for the eight cells, and Kolmogorov-Smirnov and Shapiro-Wilks statistics revealed that assumptions of normality were met. One univariate outlier was detected, however this was considered to reflect a true difference and was retained in the data set.

Normality testing for multivariate analysis revealed some skewness and kurtosis deviations for cognitive and affective empathy scores. However, Kolmogorov-Smirnov and Shapiro-Wilks statistics were non-significant for all but one cell (cognitive empathy of not involved females). Two outliers were detected on cognitive empathy scores however, as one was high and one was low, and two outliers in a sample of this size can be reasonably expected, the data were retained with no transformation. No multivariate outliers were detected based on a critical Mahalanobis distance of 13.8. Overall, the severity of the deviations from normality were deemed to be low and, as the F test is robust to moderate violations of the assumption of normality (Tabachnick & Fidell, 2001), data were not transformed.

The assumption of linearity among dependent measures was met based on scatterplot analysis. Whilst cell sizes were adequate for Analysis of Variance calculations, the assumption of equality of n across cells was not met. However, as the present research is nonexperimental, artificially equalising cell sizes would distort the differences and diminish generalisability (Tabachnick & Fidell, 2001).

Descriptive Statistics

Descriptive statistics indicated that 10% of students were classified as bullies ($n = 25$), 35% as victims ($n = 85$), 17% as bully/victims ($n = 40$), and 38% as not involved ($n = 91$).

Analysis

A two-way contingency table analysis revealed that gender and bully status were significantly related, Pearson χ^2 (3, $N = 241$) = 8.82, $p = .032$. Girls were 1.4 times more likely to be classified as not involved than boys. Boys were more likely to be bullies (1.5), victims (1.65), and bully/victims (1.5) than girls. Table 1 shows the frequencies and percentages of boys and girls in each bully status group.

In order to determine whether overall empathy varied as a function of bully status and gender, a 4 x 2 between-subjects Analysis of Variance (ANOVA) was conducted. Levene's statistic revealed that the assumption of homogeneity of variance was met. A main effect of gender was found, F (1, 233) = 18.64, $p = .000$, with overall empathy being higher on average for females ($M = 42.91$, $SD = 6.72$) than males ($M = 38.29$, $SD = 7.41$). A main effect of bully status was also found, F (3, 233) = 6.03, $p = .000$. No interaction was found. Post-hoc pairwise comparisons were conducted to investigate the bully status difference on overall empathy levels. Tukey HSD tests revealed that bully/victims had significantly lower overall empathy ($M = 35.85$, $SD = 7.81$) than victims ($M = 41.41$, $SD = 7.50$) and not involved students ($M = 41.68$, $SD = 7.11$) but did not differ significantly from bullies ($M = 39.76$, $SD = 4.94$).

In order to examine the influence of different empathy types, cognitive and affective empathy scores were calculated using SPSS by summing the numbered responses (1-5) to the questions identified as belonging to the respective Cognitive

Empathy and Affective Empathy factors of the F&T. A 4 x 2 (Bully Status x Gender) Multivariate Analysis of Variance (MANOVA) was then conducted on cognitive and affective empathy scores. Homogeneity of the variance-covariance matrices was violated based on significant Box's M test at $p < .001$. Bartlett's test of sphericity was significant and the dependent variables were found to be moderately correlated (.508). Levene's test of equality of error variances was significant for affective empathy. Due to assumption violations and unequal cell sizes, findings were interpreted at a more conservative α level of .025. Using Pillai's Trace criterion, the combined DVs were significantly affected by both gender, $F(2, 232) = 10.00, p = .000$, and bully status, $F(6, 466) = 4.11, p = .000$, but not by their interaction $F(6, 466) = 10.00, p = .996$. Using the Bonferroni method, univariate F -tests for each dependent variable were interpreted at the .012 α level. Results indicated that only affective empathy contributed to the multivariate effect of bully status $F(3, 233) = 6.74, p = .000$, and both affective and cognitive empathy contributed to the multivariate effect of gender: Affective $F(1, 233) = 10.18, p = .002$; cognitive $F(1, 233) = 18.76, p = .000$. Means indicated that both affective and cognitive empathy were higher on average for females than males. Table 2 displays the means and standard errors for affective and cognitive empathy by gender.

Post hoc analysis to the univariate F -test for affective empathy was conducted and interpreted at the .003 α level (.012 divided by 4). Pairwise comparisons revealed that bully/victims had significantly lower affective empathy scores than victims and not involved students. Table 3 displays the means and standard errors for affective and cognitive empathy by bully status.

Factor analysis on the empathy measure was conducted to determine whether the two-factor solution found by Garton and Gringart (2005) translated to the current

data. The suitability for factoring was supported with a considerable number of correlations exceeding .3 on the correlation matrix, all variables being above the accepted MSA level of .5 on the anti-image correlation matrix, a significant Barlett's Test of Sphericity, and the KMO measure being greater than .6.

Principal Component Analysis (PCA) was used to identify the number of components underlying the F&T scale. PCA revealed three factors based on eigenvalue-greater-than-one criterion which accounted for 49.25% of the variance. However the scree plot suggested the F&T scale had one underlying factor. Based on eigenvalue-greater-than-one criterion, three factors were extracted using Principal Axis Factor analysis with Varimax rotation. The rotated solution provided further support for one factor underlying the F&T scale with only one factor fulfilling the eigenvalue-greater-than-one criterion. Likewise, the scree plot suggested a one-factor solution. This factor accounted for 15.10% of the variance.

Discussion

The results indicated that overall empathy did differ on the basis of a child's role in bullying, and their gender. Additionally, both cognitive and affective empathy differed based on gender however, only affective empathy differed on the basis of a child's role in bullying. In regard to the validity of the F&T scale, results failed to find a two factor solution as found by Garton and Gringart (2005), however in measuring empathy as a complete concept, the current results were consistent with well documented findings of gender patterns for empathy.

Firstly, examining the prevalence rates enables the current research to be put into context through comparison to previous research results. Although there has been great variation in previous research prevalence rates, compared to recent research that has included similar definitions of bullying, bully status classifications

and methods of measurement, the rate of bullies (10%) was comparable, however the prevalence rates of victims (35%) and bully/victims (17%) were considerably higher in the current research. For example, Perren and Alsaker (2006) reported 11% of students were classified as bullies, 6% as victims, and 10% as bully/victims, whilst Camodeca et al. (2002) classified 9.7% of children as bullies, 8.5% as victims, and 7.6% as bully/victims. The variation in victim and bully/victim prevalence rates between the current research and recent research may have been due to the use of a less stringent classification system whereby more students became eligible for classification in 'involved' roles. However, bully prevalence was not comparatively higher, as would be expected if the alternate classification system were wholly responsible for the differences.

In response to the research question examining whether empathy differed on the basis of a child's role in bullying, the results revealed that bully/victims had lower empathy than both victims and not involved students. This is consistent with preliminary expectations based on research revealing that aggressive behaviour is associated with lower levels of empathy (e.g., Cohen & Strayer, 1996; Giancola, 2003; Schultz et al., 2004). However, based on this, bullies were also expected to have lower levels of empathy than victims and not involved students, and this difference failed to reach significance in the current study. The lack of a significant finding may have been partly due to categorisation methods which did not limit classification to those involved on a high frequency. Due to this, the differentiation between bully status classifications may have been lowered, and consequently, the empathy level differences between groups.

When examining cognitive and affective empathy levels in relation to bully status, the results revealed there were no significant differences in cognitive empathy

levels based on a child's bully status. This is consistent with related research by Shechtman (2002) in which aggressive and non-aggressive boys did not differ on levels of cognitive empathy. However, in Schechtman's research, aggressive boys had half the levels of affective empathy than non-aggressive boys, and this was somewhat replicated in the current study whereby bully/victims had lower affective empathy than victims and not involved students. Though, once again, bullies were not significantly different to victims and not involved students, therefore the current research provided only partial support for the notion that aggressive behaviour is associated with lower affective empathy. However, in addition to the lowered distinction between the bully status groups due to classification method variations, the apparent inability of the F&T scale to effectively distinguish between cognitive and affective empathy may have also contributed to the lack of significant results. Additionally, stringent alpha levels were applied to the interpretation of the results due to assumption violations, and based on results which neared significance, future research addressing the above-mentioned limitations may reveal alternate results.

Results of analyses examining the influence of gender were consistent with previous research revealing that boys were more likely to be involved as bullies and bully/victims than girls (e.g., Forero et al., 1999; Veenstra et al., 2005). Although results have varied in regard to the gender distribution for victims, the current research found that boys were also more likely to be victims. In regard to empathy, the current results were consistent with previous research which has found that girls have higher empathy levels than boys (e.g., Niec & Russ, 2002; Strayer & Roberts, 2004). This higher level of empathy for girls was found to exist on both cognitive and affective empathy. This is contrary to Cohen and Strayer's (1996) results which revealed there was no difference between girls and boys on their cognitive empathy

levels. However, considering that cognitive and affective empathy may not have been effectively separated using the F&T, the current results may be a reflection of the higher overall empathy of girls rather than each of the components.

No significant interactions between gender and bully status were found for overall empathy or the two components of empathy. This suggests that male and female patterns of empathy do not differ, however levels of empathy do differ, with girls, on average, more empathic than boys regardless of bully status.

To date, no published studies have used the F&T scale with children and therefore the present research provides important information regarding the validity of the measure. Two findings support the validity of the F&T scale as an overall measure of empathy. Firstly, the gender difference pattern of girls having higher empathy scores than males is consistent with previous research and expectations. Secondly, the comparative levels of empathy for students classified as bullies and bully/victims from those classified as victims or not-involved was partially consistent with previous aggression research. Bully/victims were significantly lower in empathy than victims and not involved students, and bullies had lower empathy but this did not reach significant levels.

Although some support for the validity of the F&T for measuring empathy in children was found, there was no clear support for the ability of the scale to effectively distinguish between cognitive and affective empathy. Despite the scale clearly including both components of empathy in the statements, it was developed primarily to measure empathy as an overall concept. Apart from complexities such as the correlation between the cognitive and affective empathy questions, and factor analysis revealing one underlying factor, two statements on the factor labelled 'affective empathy' appeared to have undertones of cognitive empathy. The

statements of 'Sometimes I feel like I don't know how to help when people around me are upset' and 'When people around me are nervous or worried, I get a bit scared and worried too' may have inhibited the effective separation of the two components of empathy. Litvack-Miller et al. (1997) reported similar findings with their adapted version of the IRI in which they found their perspective taking factor included items that were not as clearly cognitive as those in the original IRI.

Limitations and Future Research

Although the present research was an important introduction to the relations between bullying and empathy, there are several limitations which need to be addressed in future research. Firstly, a measure which clearly distinguishes between cognitive and affective empathy is required to clarify and expand upon the current research. Additionally, the current research relied solely on self-report measures. Although self-report measures are commonly used in isolation in bullying and empathy research, it has been suggested that multi-method measurement to also include peer-nominations, teacher ratings and observation allows for more valid results to appear (Pellegrini & Long, 2002; Smith, 2004).

Another limitation of the current research is the small number of schools from which the participants were drawn, additionally, the participating schools were chosen for their convenience and were therefore in similar areas. Research has found that bullying occurs more frequently in some schools than others, for example, Olweus (1993) found that children attending some schools had a four to five times greater risk of being bullied. Therefore, future research needs to involve a larger number of schools with diverse locations, in order to improve the generalisability and validity of results.

Also, by not using the 'once per week or more' cut-off for bully status

categorisation, the bully status categories were not limited to extreme bullying frequencies. By including students who reported being bullies or victims on a moderate level, the effects may have been somewhat reduced. Additionally, despite being a popular occurrence in bullying research, categorising the participants may have altered effect sizes and statistical significance, as differences between responses are lost after categorisation. For example: one child may have reported that they bullied others once a week whilst another may have indicated they bullied on a daily basis. Once these children are categorised as 'bully', the frequency is no longer considered and this may have important elements to inform research and clarify the relationship between bullying and empathy. Future research may benefit from obtaining a clear numerical value of how often the participant bullies, or is victimised, and evaluating this on a continuum.

As the combination of bullying and empathy is a relatively new area of research, and therefore limited in scope, there are numerous possibilities to extend the current research to further understand the relationship between bullying and empathy. One such suggestion would be for future research to examine the influence of age, as both bullying and empathy has been suggested to vary with age. For example, numerous researchers have suggested that bullying decreases as age increases (Kumpulainen et al., 1999; Olweus, 1993; Rivers & Smith, 1994; Rushton, Fulker, Neale, Nias, & Eysenck, 1986; Scheithauer et al., 2006) and some have suggested that empathic responsiveness increases with age (Cohen & Strayer, 1996; Rushton et al., 1986; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). Therefore, the inclusion of 'age' in future research is likely to aid in the development of a comprehensive understanding of the bullying and empathy relationship.

Future research to examine whether empathy level and type is related to

whether bullying is performed in groups or individually would also be informative, as those who bully as part of a group may be yielding to social pressure, whereas those who bully alone may differ on cognitive and/or affective empathy levels. Likewise, the inclusion of the type of bullying (direct or indirect) would be beneficial in describing the bullying/empathy relationship as preference for one or the other may also be related to empathy level and type.

In conclusion, the present research sought to investigate the bullying/empathy relationship by examining whether empathy level and type varied on the basis of bully status and gender. Additionally, the research sought to examine the validity of the F&T scale. The results revealed that empathy level did vary as a result of both bully status and gender, with girls having higher levels of empathy than boys and bully/victims having lower empathy levels than victims and not involved students. In regard to empathy type, it was found that girls were higher than boys on cognitive and affective empathy and that only affective empathy varied based on bully status with bully/victims scoring lower than victims and not involved students. The validity of the F&T scale as an overall measure of empathy gained some support however, the ability of the scale to effectively distinguish between cognitive and affective empathy was not supported. Despite limitations in the ability to measure cognitive and affective empathy separately, the present research provided some support for the suggestion that bullying intervention programmes may benefit from including affective empathy raising strategies. However, as this is a relatively new area of research, extensions to the current research and addressing the identified limitations would clarify the role of empathy in bullying and enable bullying interventions to be enhanced in future years.

References

- Baldry, A. C. (2004). The impact of direct and indirect bullying on the mental and physical health of Italian youngsters. *Aggressive Behavior, 30*, 343-355.
- Bonica, C., Arnold, D. H., Fisher, P. H., Zeljo, A., & Yershova, K. (2003). Relational aggression, relational victimization, and language development in preschoolers. *Social Development, 12*, 551-562.
- Braaten, E. B., & Rosen, L. A. (2000). Self-regulation of affect in Attention Deficit-Hyperactivity Disorder (ADHD) and non-ADHD boys: Differences in empathic responding *Journal of Consulting and Clinical Psychology, 68*, 313-321.
- Bryant, B. K. (1982). An index of empathy for children and adolescents. *Child Development, 53*, 413-425.
- Camodeca, M., Goossens, F. A., Meerum Terwogt, M., & Schuengel, C. (2002). Bullying and victimization among school-age children: Stability and links to proactive and reactive aggression. *Social Development, 11*, 332-345.
- Charach, A., Pepler, D., & Ziegler, S. (1995). Bullying at school: A Canadian perspective. *Education Canada, 35*(1), 12-18.
- Chlopan, B. E., McCain, M. L., Carbonell, J. L., & Hagen, R. L. (1985). Empathy: Review of available measures. *Journal of Personality and Social Psychology, 48*, 635-653.
- Cohen, D., & Strayer, J. (1996). Empathy in conduct-disordered and comparison youth. *Developmental Psychology, 32*, 988-998.
- Cotton, K. (2001). Developing empathy in children and youth. *School Improvement Research Series Close Up # 13*. Retrieved 10 March, 2006, from <http://www.nwrel.org/scpd/sirs/7/cu13.html>

- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development*, 66, 710-722.
- Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, 101, 91-119.
- Eisenberg, N., Murphy, B. C., & Shepard, S. (1997). The development of empathic accuracy. In W. Ickes (Ed.), *Empathic Accuracy* (pp. 73-116). New York: Guilford Press.
- Eslea, M., & Mukhtar, K. (2000). Bullying and racism among Asian schoolchildren in Britain. *Educational Research*, 42, 207-217.
- Feshbach, N. D. (1997). Empathy, the formative years: Implications for clinical practice. In A. C. Bohart & L. S. Greenberg (Eds.), *Empathy reconsidered: New directions in psychotherapy* (pp. 33-59). Washington, D.C.: American Psychological Association.
- Forero, R., McLellan, L., Rissel, C., & Bauman, A. (1999). Bullying behaviour and psychosocial health among school students in New South Wales, Australia: Cross sectional survey. *British Medical Journal*, 319, 344-348.
- Garton, A. F., & Gringart, E. (2005). The development of a scale to measure empathy in 8- and 9-year old children. *Australian Journal of Education and Developmental Psychology*, 5, 17-25.
- Giancola, P. R. (2003). The moderating effects of dispositional empathy on alcohol-related aggression in men and women. *Journal of Abnormal Psychology*, 112, 275-281.
- Griffin, R. S., & Gross, A. M. (2004). Childhood bullying: Current empirical findings and future directions for research. *Aggression and Violent Behavior*, 9, 379-400.

- Grossman, D. C., Neckerman, H. J., Koepsell, T. D., Liu, P.-Y., Asher, K. N., Beland, K., et al. (1997). Effectiveness of a violence prevention curriculum among children in elementary school: A randomised controlled trial. *JAMA*, 277, 1605-1611.
- Hanish, L. D., Eisenberg, N., Fabes, R. A., Spinrad, T. L., Ryan, P., & Schmidt, S. (2004). The expression and regulation of negative emotions: Risk factors for young children's peer victimisation. *Development and Psychopathology*, 16, 335-353.
- Hastings, P. D., Zahn-Waxler, C., Robinson, J., Usher, B., & Bridges, D. (2000). The development of concern for others in children with behavior problems. *Developmental Psychology*, 36, 531-546.
- Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry*, 41, 441-455.
- Hodges, E. V. E., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental Psychology*, 33, 1032-1039.
- Juvonen, J., & Graham, S. (2004). Research-based interventions on bullying. In C. E. Sanders & G. D. Phye (Eds.), *Bullying: Implications for the classroom* (pp. 229-255). San Diego: Elsevier Academic Press.
- Karatzias, A., Power, K. G., & Swanson, V. (2002). Bullying and victimization in Scottish secondary schools: Same or separate entities? *Aggressive Behavior*, 28, 45-61.
- Kaukiainen, A., Björkqvist, K., Lagerspetz, K., Österman, K., Salmivalli, C.,

- Rothberg, S., et al. (1999). The relationships between social intelligence, empathy, and three types of aggression. *Aggressive Behavior*, 25, 81-89.
- Koestner, R., Franz, C., & Weinberger, J. (1990). The family origins of empathic concern: A 26-year longitudinal study. *Journal of Personality and Social Psychology*, 58, 709-717.
- Kumpulainen, K., Räsänen, E., & Henttonen, I. (1999). Children involved in bullying: Psychological disturbance and the persistence of the involvement. *Child Abuse and Neglect: The International Journal*, 23, 1253-1262.
- Li, Q. (2006). Cyberbullying in schools: A research of gender differences. *School Psychology International*, 27, 157-170.
- Litvack-Miller, W., McDougall, D., & Romney, D. M. (1997). The structure of empathy during middle childhood and its relationship to prosocial behaviour. *Genetic, Social and General Psychology Monographs*, 123, 303-325.
- Miller, P. A., & Eisenberg, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin*, 103, 324-344.
- Natvig, G. K., Albrektsen, G., & Qvarnström, U. (2001). School-related stress experience as a risk factor for bullying behavior. *Journal of Youth and Adolescence*, 30, 561-575.
- Niec, L. N., & Russ, S. W. (2002). Children's internal representations, empathy, and fantasy play: A validity study of the SCORS-Q. *Psychological Assessment*, 14, 331-338.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Oxford: Blackwell Publishers.
- O'Moore, A. M., & Minton, S. J. (2005). Evaluation of the effectiveness of an anti-bullying programme in primary schools. *Aggressive Behavior*, 31, 609-622.

- Pellegrini, A. D., & Long, J. D. (2002). A longitudinal study of bullying, dominance, and victimization during the transition from primary school through secondary school. *British Journal of Developmental Psychology*, 20, 259-280.
- Perren, S., & Alsaker, F. D. (2006). Social behavior and peer relationships of victims, bully-victims, and bullies in kindergarten. *Journal of Child Psychology and Psychiatry*, 47, 45-57.
- Rigby, K. (1996). *Bullying in schools: And what to do about it*. Melbourne: The Australian Council for Educational Research Ltd.
- Rigby, K. (1997). What children tell us about bullying in schools. *Children Australia*, 22(2), 28-34.
- Rigby, K. (1998a). Peer relations at school and the health of adolescents. *Youth Studies Australia*, 17, 13-17.
- Rigby, K. (1998b). Suicidal ideation and bullying among Australian secondary school students. *Australian Educational and Developmental Psychologist*, 15, 45-61.
- Rigby, K. (2002). *A meta-evaluation of methods and approaches to reducing bullying in pre-schools and early primary school in Australia*. Barton, ACT: Commonwealth Attorney-General's Department.
- Rigby, K. (2004). Addressing bullying in schools: Theoretical perspectives and their implications. *School Psychology International*, 25, 287-300.
- Rigby, K., & Slee, P. T. (1998). The Peer Relations Questionnaire (PRQ). Point Lonsdale, VIC: The Professional Reading Guide.
- Rivers, I., & Smith, P. K. (1994). Types of bullying behaviour and their correlates. *Aggressive Behavior*, 20, 359-368.

Rushton, J. P., Fulker, D. W., Neale, M. C., Nias, D. K. B., & Eysenck, H. J. (1986).

Altruism and aggression: The heritability of individual differences. *Journal of Personality and Social Psychology*, 50, 1192-1198.

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, 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.

Salmivalli, C., & Nieminen, E. (2002). Proactive and reactive aggression among school bullies, victims, and bully-victims. *Aggressive Behavior*, 28, 30-44.

Sanders, C. E. (2004). What is bullying? In C. E. Sanders & G. D. Phye (Eds.), *Bullying: Implications for the classroom* (pp. 1-18). San Diego: Elsevier Academic Press.

Scheithauer, H., Hayer, T., Petermann, F., & Jugert, G. (2006). Physical, verbal, and relational forms of bullying among German students: Age trends, gender differences, and correlates. *Aggressive Behavior*, 32, 261-275.

Schultz, D., Izard, C., E, & Bear, G. (2004). Children's emotion processing: Relations to emotionality and aggression. *Development and Psychopathology*, 16, 371-387.

Shechtman, Z. (2002). Cognitive and affective empathy in aggressive boys: Implications for counseling. *International Journal for the Advancement of Counselling*, 24, 211-222.

Smith, P. K. (2004). Bullying: Recent developments. *Child and Adolescent Mental Health*, 9(3), 98-103.

Smith, P. K., Talamelli, L., Cowie, H., Naylor, P., & Chauhan, P. (2004). Profiles of non-victims, escaped victims, continuing victims and new victims of school bullying. *British Journal of Educational Psychology*, 74, 565-581.

- Strayer, J., & Roberts, W. (2004). Empathy and observed anger and aggression in five-year-olds. *Social Development, 13*, 1-13.
- Sutton, J., & Smith, P. K. (1999). Bullying as a group process: An adaptation of the participant role approach. *Aggressive Behavior, 25*, 97-111.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn and Bacon.
- Unnever, J. D. (2005). Bullies, aggressive victims, and victims: Are they distinct groups? *Aggressive Behavior, 31*, 153-171.
- van der Wal, M. F., de Wit, C. A. M., & Hirasing, R. A. (2003). Psychosocial health among young victims and offenders of direct and indirect bullying. *Pediatrics, 111*, 1312-1317.
- Veenstra, R., Lindenberg, S., Oldehinkel, A. J., De Winter, A. F., Verhulst, F. C., & Ormel, J. (2005). Bullying and victimization in elementary schools: A comparison of bullies, victims, bully/victims, and uninvolved preadolescents. *Developmental Psychology, 41*, 672-682.
- Williams, K., Chambers, M., Logan, S., & Robinson, D. (1996). Association of common health symptoms with bullying in primary school children. *British Medical Journal, 313*, 17-19.
- Yang, S.-J., Kim, J.-M., Kim, S.-W., Shin, I.-S., & Yoon, J.-S. (2006). Bullying and victimization behaviors in boys and girls at South Korean primary schools. *Journal of the American Academy of Child and Adolescent Psychiatry, 45*, 69-77.
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. *Developmental Psychology, 28*, 126-136.

Table 1
Frequencies of Bully Status as a Function of Gender

Gender	Bully Status			
	Bully	Victim	Bully/Victim	Not Involved
Male				
Number (%)	15 (60%)	53 (62%)	24 (60%)	38 (42%)
Female				
Number (%)	10 (40%)	32 (38%)	16 (40%)	53 (58%)
Total	25	85	40	91

Table 2
Means and Standard Errors on the Dependent Variables for Males and Females

Gender	Affective Empathy		Cognitive Empathy	
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Male	20.19	.40	17.50	.38
Female	22.14	.47	20.04	.45

Table 3

Means and Standard Errors on the Dependent Variables for the Bully Status Groups

Bully Status	Affective Empathy		Cognitive Empathy	
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>
Bully	20.57	.83	19.60	.79
Victim	22.59	.45	19.30	.43
Bully/Victim	19.32	.65	17.06	.63
Not Involved	22.19	.43	19.10	.41

Appendix A

Participant Information Letter

Research Title: Bullying and Victimisation in Primary Schools: The Relationships between Bully Status, Empathy and Gender

Dear Parent,

My name is Teresa Sapienza and I am a fourth year Psychology student at Edith Cowan University. The research project outlined below is being undertaken as part of the requirements of an Honours degree at Edith Cowan University and has been approved by the Human Research Ethics Committee.

Your child's class is invited to participate in research examining bullying and victimization, and the relationship with empathy and gender. The aim of the research is to provide a better understanding of these relationships, which may be useful in developing more effective bullying intervention programmes for schools.

In this research your child will be asked to complete a short questionnaire which will take approximately 15-20 minutes. There will be a small number of questions asking about the children's experiences with bullying and victimization, which will be answered on a scale (e.g. Never, Sometimes or Often). The remainder of the questionnaire assesses empathy and contains statements about the way people think and feel in certain situations. These are also answered on a scale.

Although the questionnaire is about a sensitive issue for some children, the questions are not anticipated to cause distress as they do not require the children to describe details about their experiences with bullying/victimisation. In addition, the questionnaires will not require the children to identify themselves.

At the conclusion of the study, a report of the results will be available upon request but at no point will your child's answers be identifiable. Your child's participation in this research is voluntary, and you or your child are free to withdraw consent at any

time prior to the children completing the questionnaire.

If you have any questions about this research please contact me or my supervisor on the details listed below. Alternatively, if you would like to speak to an independent person, you may contact Kim Gifkins, Research Ethics Officer, Edith Cowan University, 100 Joondalup Drive, JOONDALUP WA 6027; Telephone: 6304 2170; Email: research.ethics@ecu.edu.au.

Attached is a consent form for your child to participate. I would greatly appreciate you allowing your child to participate in this research by completing and returning the consent form to school with your child by Wednesday 10th May, 2006.

Thankyou.

Teresa Sapienza

Researcher

Telephone: 0409 109 900

sapienza@bigpond.net.au

Professor Alison Garton

Supervisor

Telephone: 6304 5110

a.garton@ecu.edu.au

Please keep this information letter for your own reference.

Appendix B

Informed Consent Form

Research Title: Bullying and Victimisation in Primary Schools: The
 Relationships between Bully Status, Empathy and Gender

Researcher: Teresa Sapienza

I, _____ (the parent/guardian of the participant) have
read the information provided with this consent form and any questions I have asked
have been answered to my satisfaction.

I agree to allow my child, _____ (name) to participate in the
activities associated with this research and understand that I, or my child, can
withdraw consent at any time.

I agree that the research data gathered in this study may be published providing my
child is not identified in any way.

Signed: _____

Date: _____

Appendix C

Principal and Teacher Information Letter

Research Title: Bullying and Victimization in Primary Schools: The Relationships between Bully Status, Empathy and Gender

Dear Principal and Teachers,

My name is Teresa Sapienza and I am a fourth year Psychology student at Edith Cowan University. The research project outlined below is being undertaken as part of the requirements of an Honours degree at Edith Cowan University and has been approved by the Human Research Ethics Committee.

Your school/class is invited to participate in research examining bullying and victimization, and the relationship with empathy and gender. The aim of the research is to provide a better understanding of these relationships, which may be useful in developing more effective bullying intervention programmes for schools.

In this research, children in grades 4 to 6 will be asked to complete a short questionnaire which is answered on scales (e.g. Never, Sometimes or Often). There will be a small number of questions concerning the children's experiences with bullying and victimization and the remainder of the questionnaire assesses empathy.

Although the questionnaire is about a sensitive issue for some children, the questions are not anticipated to cause distress as they do not require the children to describe details about their bullying/victimisation experiences. Additionally, the questionnaires do not require the children to identify themselves. Although no individual child can be identified, the school and class will be recorded to enable the Principal/Teacher to be advised if a questionnaire indicates a classroom contains a child who may be at risk. This would enable immediate intervention or monitoring at a classroom level to occur.

The questionnaires will be administered by me, in the classroom setting. It is estimated that each class will take approximately 30 minutes to complete the questionnaires, including instruction time. The questionnaires will need to be administered in Term 2, approximately in weeks 3 to 5.

At the conclusion of the study, a report of the results will be available, however schools will be combined in the analysis and no separate data such as level of bullying or empathy at a particular school will be available.

Participation in this research is voluntary, and you can withdraw consent at any time. If you have any questions please contact me or my supervisor on the details listed below. Alternatively, if you would like to speak to an independent person, you may contact Kim Gifkins, Research Ethics Officer, Edith Cowan University, 100 Joondalup Drive, JOONDALUP WA 6027; Telephone: 6304 2170; Email: research.ethics@ecu.edu.au.

I would greatly appreciate your school/class being involved in this research by completing the attached consent form.

Thankyou.

Teresa Sapienza

Researcher

Telephone: 0409 109 900

sapienza@bigpond.net.au

Professor Alison Garton

Supervisor

Telephone: 6304 5110

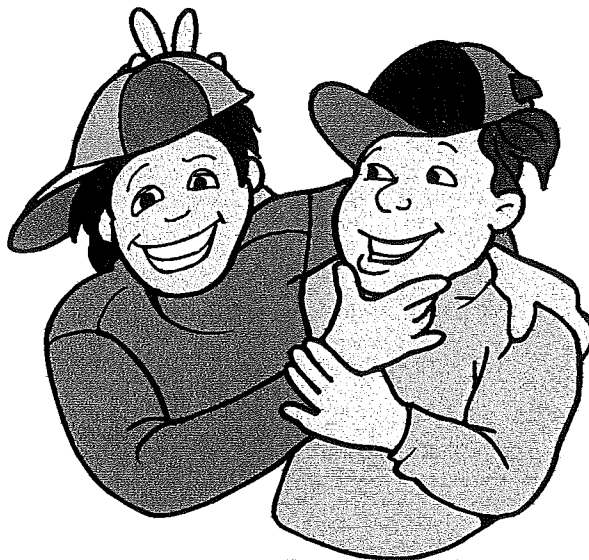
a.garton@ecu.edu.au

Please keep this information letter for your own reference.

Appendix D

Participant Information and Instructions

CONFIDENTIAL QUESTIONNAIRE



Dear Student,

My name is Teresa Sapienza, I am a psychology student at Edith Cowan University.

I will be using this questionnaire to find out about how students treat each other at school and how they think and feel about some situations.

The questionnaire will ask you some questions about bullying and then some questions about how you think and feel.

No-one at your school will see your answers, and your name will not be on the questionnaire so we cannot tell who you are.

This is not a test and there are no right or wrong answers.

Please answer all the questions as honestly as you can.

If you have any questions please raise your hand and I will come and see you.

Teresa Sapienza
Researcher

Appendix E

Bullying Definition

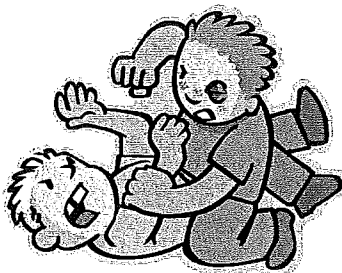
What is Bullying?

There are lots of different ways that children can bully others or be bullied. Bullying is when these things happen again and again to someone who can't stop it from happening:

1. Being ignored, left out on purpose, or not allowed to join in.



2. Being called nasty names.



3. Being hit, pushed, kicked or having things thrown at them.

4. Being made fun of or teased in a hurtful way



5. Having lies or nasty stories told about them so other students won't like them.

6. Being made afraid of getting hurt



We don't call it bullying when two students who are AS STRONG AS each other get into a fight, or when teasing is done in a friendly and playful way.

(Adapted from the Friendly Schools & Families Bullying Project Questionnaire)

Bullying can make people feel bad, lonely or afraid and it can help to talk to someone about it. You can talk to someone at school, a family member, or you can call Kids

Help-Line on 1800 55 1800

Appendix F

Bullying & Victimization Questionnaire

School: _____

Number: _____

Questionnaire

1. Are you a boy or a girl? *(Please circle your answer)*

Boy

Girl

2. How old are you? _____

3. What grade are you in? _____

4. Have you been bullied by a student or group of students from school this year? *(Please circle **one** answer)*

No

Yes, only once

Yes, a few times

Yes, lots of times

5. Did any of these things happen to you this year? Either by one student or a group of students? *(Please circle **one** answer for **each** statement)*

Being teased or made fun of in a hurtful way	Never	Sometimes	Often
Being called nasty names	Never	Sometimes	Often
Being ignored or left out of things	Never	Sometimes	Often
Being threatened you would be hurt	Never	Sometimes	Often
Getting hit, kicked, pushed or having things thrown at you	Never	Sometimes	Often
Having lies or hurtful stories spread about you	Never	Sometimes	Often
Getting nasty messages on your computer or mobile phone	Never	Sometimes	Often

Having your things taken from you or broken Never Sometimes Often

Were you bullied in a different way?

How often has this happened *this year*? Sometimes Often

6. **How often has one or more of the things listed above happened to you this year? (Please circle one answer)**

- Never
- Once every few weeks
- About once a week
- One or two days a week
- Most days
- Every day

7. **Have you bullied another student from school this year? Either by yourself or as part of a group? (Please circle one answer)**

- No
- Yes, only once
- Yes, a few times
- Yes, lots of times

8. **Did you do any of these things to another student this year? Either by yourself or as part of a group? (Please circle one answer for each statement)**

Teased or made fun of someone in a hurtful way	Never	Sometimes	Often
Called someone nasty names	Never	Sometimes	Often
Ignored or left someone out of games and activities	Never	Sometimes	Often
Threatened to hurt someone else	Never	Sometimes	Often

Hit, kicked, pushed or threw something at someone else	Never	Sometimes	Often
Told or spread lies or hurtful stories about someone else	Never	Sometimes	Often
Sent nasty messages to another student using the computer or mobile phone	Never	Sometimes	Often
Taken or broken things belonging to another student	Never	Sometimes	Often

Have you bullied another student in a different way?

How often has this happened <i>this year?</i>	Sometimes	Often
---	-----------	-------

9. How often have you been involved in one or more of the things listed above this year? (Please circle *one* answer)

- Never
- Once every few weeks
- About once a week
- One or two days a week
- Most days
- Every day

Please turn to Part 2.

Appendix G

Feeling and Thinking Scale

PART 2

The following questions are about how you think and feel,
not about what you would do.

Please put up your hand if you need some help.

(Please circle the answer that best describes how you think or feel for each statement)

1. I often worry about people that are not as lucky as me, and feel sorry for them.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

2. Emergency situations make me feel worried and upset

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

3. When I am arguing with my friends about what we are going to do, I think carefully about what they are saying before I decide whose idea is best.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

4. I want to help people who get treated badly.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

5. Sometimes I feel like I don't know how to help when people around me are upset.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

6. I sometimes try to understand my friends better by pretending I am them.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

7. When people around me are nervous or worried, I get a bit scared and worried too.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

8. I often get upset or distressed by things I see happen.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

9. I think people can have different opinions about the same thing.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

10. I am quite a gentle and kind person.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

11. When I'm angry or upset at someone, I usually try to imagine what he or she is thinking or feeling.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

12. I get very worried and upset when I see someone who needs help in an emergency.

A	B	C	D	E
Not like me at all	Hardly ever like me	Occasionally like me	Fairly like me	Very like me

Appendix H

Raw Data Table

Id	school	gender	age	grade	status	q1aff	q2aff	q3cog	q4aff	q5cog	q6cog	q7cog	q8aff	q9cog	q10aff	q11cog	q12aff	empathy	affect	cognit
1	1	2	9	4	4	3	2	4	4	3	5	3	3	4	5	2	5	43.00	22.00	21.00
2	1	2	9	4	2	2	3	4	5	5	2	3	5	4	3	4	2	42.00	20.00	22.00
3	1	1	9	4	4	5	5	2	5	5	1	1	5	1	3	1	5	39.00	28.00	11.00
4	1	2	9	4	4	2	4	3	2	2	1	1	4	2	5	4	5	35.00	22.00	13.00
5	1	2	9	4	4	5	5	5	4	5	2	4	4	5	5	5	5	54.00	28.00	26.00
6	1	1	9	4	1	5	2	2	5	1	2	4	1	5	4	5	4	40.00	21.00	19.00
7	1	2	9	4	3	3	4	4	4	5	4	3	5	5	5	3	4	49.00	25.00	24.00
8	1	1	10	5	2	4	4	4	3	4	4	3	2	3	3	4	3	41.00	19.00	22.00
10	1	1	9	5	4	4	3	3	5	2	3	2	1	2	5	3	4	37.00	22.00	15.00
11	1	2	9	4	2	3	3	2	5	5	1	3	3	5	5	3	4	42.00	23.00	19.00
12	1	2	9	4	2	5	5	5	5	5	1	1	3	5	5	3	5	48.00	28.00	20.00
13	1	2	9	4	4	3	1	2	5	5	1	3	4	5	4	3	4	40.00	21.00	19.00
14	1	1	9	4	2	3	3	3	3	2	1	1	2	2	1	1	2	24.00	14.00	10.00
15	1	1	9	4	2	4	3	3	4	3	2	2	2	3	5	3	3	37.00	21.00	16.00
16	1	1	9	4	2	3	3	3	3	4	1	2	2	2	2	2	2	29.00	15.00	14.00
17	1	2	9	5	4	3	3	5	3	3	3	2	2	3	4	3	3	37.00	18.00	19.00
18	1	2	9	4	4	3	3	4	5	3	4	4	3	5	5	3	4	46.00	23.00	23.00
19	1	1	9	4	2	4	3	3	5	3	3	3	2	3	5	3	4	41.00	23.00	18.00
20	1	2	9	5	2	4	4	3	4	4	4	3	3	3	3	3	4	42.00	22.00	20.00
21	1	2	10	5	4	5	3	4	3	4	3	5	5	4	5	3	4	48.00	25.00	23.00
22	1	1	9	4	4	5	1	4	5	4	4	5	5	5	5	5	5	53.00	26.00	27.00
23	1	1	9	4	2	5	4	5	3	2	3	1	3	5	3	3	4	41.00	22.00	19.00
24	1	2	9	4	4	2	3	3	5	5	5	5	5	5	5	4	4	51.00	24.00	27.00
25	1	1	9	5	4	3	2	3	5	1	1	2	2	5	4	3	3	34.00	19.00	15.00
26	1	1	9	5	4	3	3	2	5	4	3	3	4	3	3	4	4	41.00	22.00	19.00
27	1	1	9	5	2	3	4	3	5	4	3	2	4	3	5	3	5	44.00	26.00	18.00
28	1	2	9	4	4	5	4	4	5	4	5	4	3	5	4	4	5	52.00	26.00	26.00
29	1	2	9	4	4	2	4	4	5	3	3	4	4	5	4	2	5	45.00	24.00	21.00
30	1	2	9	4	3	3	1	3	3	3	2	3	3	3	4	3	4	35.00	18.00	17.00
31	1	1	9	5	1	4	2	4	3	2	1	3	1	5	4	4	4	37.00	18.00	19.00
32	1	2	10	5	4	1	4	1	5	4	1	1	3	5	5	5	5	40.00	23.00	17.00
33	1	1	9	5	2	4	4	5	4	3	4	2	4	4	4	4	4	46.00	24.00	22.00
34	1	1	9	5	3	2	3	2	3	3	1	2	3	3	3	2	3	30.00	17.00	13.00
35	1	2	10	5	4	5	5	5	5	4	4	2	3	5	4	5	5	52.00	27.00	25.00
36	1	2	10	5	2	4	3	5	3	5	5	4	3	4	4	5	5	50.00	22.00	28.00
37	1	2	10	5	4	3	3	2	3	4	2	1	3	4	4	3	3	35.00	19.00	16.00
38	1	1	9	5	4	4	3	3	4	4	3	2	3	4	4	3	4	41.00	22.00	19.00
39	1	2	9	5	2	3	5	3	4	5	2	5	5	4	4	5	5	50.00	26.00	24.00
40	1	1	9	5	4	3	3	3	4	3	4	1	3	3	3	3	4	37.00	20.00	17.00
41	1	1	9	5	2	3	4	2	3	3	2	3	3	2	3	3	4	35.00	20.00	15.00
42	1	2	10	5	3	3	3	5	5	2	2	3	3	4	3	3	5	41.00	22.00	19.00

43	1	2	9	5	4	4	4	4	3	4	3	4	4	3	2	3	3	3	4	3	3	39.00	22.00	17.00
44	1	1	10	5	4	4	3	3	5	4	4	4	4	2	2	3	5	4	3	3	41.00	20.00	21.00	
45	1	1	10	5	2	1	5	2	2	5	1	5	1	4	5	1	4	2	3	2	34.00	20.00	14.00	
46	1	2	9	5	2	4	5	4	4	5	4	5	4	5	2	2	3	5	3	3	42.00	24.00	18.00	
47	1	1	9	5	2	4	3	5	5	5	3	5	3	2	1	2	3	5	4	4	41.00	23.00	18.00	
48	1	2	10	5	2	5	4	4	4	4	3	4	3	4	3	4	4	5	4	4	48.00	26.00	22.00	
49	1	2	10	5	4	4	3	3	3	3	3	3	3	2	1	2	2	5	4	3	35.00	20.00	15.00	
50	1	1	9	5	3	1	3	3	3	4	4	3	4	3	1	2	4	4	3	1	32.00	15.00	17.00	
51	1	2	10	5	2	3	5	4	4	2	3	5	2	5	2	2	2	4	5	4	41.00	20.00	21.00	
52	1	1	9	5	3	4	3	4	3	2	3	2	3	2	3	1	3	2	2	2	32.00	15.00	17.00	
53	1	1	9	5	3	4	3	4	3	2	3	2	3	2	4	3	1	3	2	2	31.00	15.00	16.00	
54	1	1	9	5	1	4	1	4	1	2	5	2	2	4	1	4	1	5	5	4	39.00	20.00	19.00	
55	1	2	9	5	1	4	4	3	4	3	4	3	4	4	4	3	3	3	3	5	44.00	21.00	23.00	
56	1	1	10	5	4	3	2	2	3	4	2	4	2	2	2	3	5	5	2	3	36.00	20.00	16.00	
57	1	2	9	5	2	5	5	4	4	5	4	5	4	1	3	4	3	5	3	5	47.00	29.00	18.00	
58	1	1	10	6	2	3	2	3	2	3	2	3	2	1	1	2	4	4	1	1	27.00	15.00	12.00	
59	1	2	11	6	4	4	5	4	4	4	4	4	4	4	4	4	4	4	3	5	49.00	26.00	23.00	
60	1	1	10	6	1	4	2	1	3	2	1	3	2	1	1	2	4	4	3	3	30.00	18.00	12.00	
61	1	1	11	6	2	5	5	4	4	5	5	5	5	5	5	5	4	5	5	5	58.00	30.00	28.00	
62	1	2	10	6	2	5	2	4	4	4	4	4	4	3	1	4	5	4	3	5	44.00	24.00	20.00	
63	1	2	11	6	4	2	3	3	3	2	3	2	3	2	3	3	4	4	2	3	34.00	17.00	17.00	
64	1	2	11	6	4	1	2	3	3	5	5	5	5	5	5	5	5	5	5	5	51.00	23.00	28.00	
65	1	1	10	6	4	1	2	4	4	4	2	4	4	2	3	2	3	4	2	2	31.00	15.00	16.00	
66	1	1	10	6	2	3	3	3	3	3	3	3	3	1	2	2	3	3	3	3	33.00	18.00	15.00	
67	1	1	10	5	4	3	2	2	3	5	1	1	1	1	2	2	5	4	3	2	32.00	18.00	14.00	
68	1	1	10	6	4	5	2	2	2	5	1	1	1	2	1	3	5	4	4	3	37.00	22.00	15.00	
69	1	1	9	5	4	2	3	2	2	5	4	1	4	1	3	3	5	3	3	4	38.00	20.00	18.00	
70	1	1	10	5	3	4	1	5	5	4	4	5	4	5	3	1	5	3	2	1	39.00	15.00	24.00	
71	1	1	10	6	2	5	5	5	5	5	5	5	5	5	5	5	5	4	3	3	55.00	27.00	28.00	
72	1	2	11	6	4	5	5	5	5	5	5	5	5	1	5	5	5	5	5	5	56.00	30.00	26.00	
73	1	2	10	6	2	4	5	5	5	5	3	1	5	1	5	5	5	4	5	5	52.00	28.00	24.00	
74	1	1	10	6	2	4	3	2	2	5	4	4	5	4	4	5	4	4	5	3	48.00	24.00	24.00	
75	1	2	11	6	4	4	4	5	5	5	5	5	5	5	4	3	5	5	3	4	53.00	26.00	27.00	
76	1	2	10	6	4	4	5	5	4	5	4	5	4	5	4	3	5	4	4	5	52.00	26.00	26.00	
77	1	2	11	6	3	3	3	3	3	4	1	1	2	1	2	3	4	4	1	3	32.00	20.00	12.00	
78	1	2	10	6	2	5	3	3	3	5	3	3	5	3	5	5	3	5	3	5	48.00	28.00	20.00	
79	1	2	11	6	2	4	5	4	4	5	4	5	4	2	2	3	3	5	3	3	43.00	25.00	18.00	
80	1	2	10	6	4	3	3	4	3	3	3	3	3	2	2	3	5	5	1	5	39.00	22.00	17.00	
81	1	2	10	6	4	5	4	4	4	5	5	5	5	5	4	4	3	5	4	5	51.00	28.00	23.00	
82	1	1	10	6	2	5	5	5	2	5	3	1	4	1	4	5	3	4	1	4	42.00	28.00	14.00	
83	1	1	11	6	3	4	4	4	3	5	5	3	5	4	2	4	4	3	2	3	41.00	23.00	18.00	
84	1	2	11	6	4	4	4	4	5	4	4	4	4	1	3	1	5	4	1	3	39.00	20.00	19.00	

85	1	2	11	6	2	2	4	4	4	2	1	2	3	5	4	1	2	32.00	16.00
86	1	1	11	6	4	4	4	4	4	5	4	3	2	5	4	4	5	47.00	25.00
87	1	2	11	6	3	1	2	1	1	1	1	1	2	5	1	1	2	21.00	10.00
88	1	1	10	6	3	3	2	3	3	1	1	1	1	5	4	1	3	28.00	16.00
89	1	1	11	6	4	2	2	2	1	1	3	1	1	3	3	1	2	22.00	12.00
90	1	2	10	6	4	3	5	4	4	5	2	5	2	5	5	3	4	46.00	25.00
91	1	1	11	6	2	2	2	4	3	3	4	1	1	4	3	3	1	28.00	12.00
92	1	2	11	6	2	2	4	4	4	3	1	3	3	3	4	2	3	35.00	19.00
93	1	1	10	6	3	4	2	2	3	4	2	3	1	5	3	2	2	32.00	17.00
94	1	2	10	6	1	5	4	5	5	3	5	3	2	5	4	5	5	49.00	24.00
109	2	2	9	4	3	2	4	5	5	2	2	5	4	4	2	5	1	41.00	16.00
110	2	1	8	4	3	3	3	3	3	2	3	3	1	4	2	3	4	34.00	17.00
111	2	1	9	4	3	1	2	1	2	3	1	3	2	1	3	2	1	21.00	11.00
112	2	1	10	5	1	1	1	2	4	5	2	1	1	4	4	5	3	34.00	18.00
113	2	1	10	5	4	3	4	1	1	5	1	1	3	3	5	3	4	35.00	23.00
114	2	1	10	5	2	2	1	5	1	1	1	5	1	2	5	1	5	32.00	17.00
115	2	1	10	5	4	4	4	4	3	4	4	4	4	4	3	4	4	47.00	23.00
116	2	1	9	4	3	4	2	5	5	5	1	3	2	5	1	5	5	43.00	22.00
117	2	1	9	4	2	4	5	4	4	5	4	4	2	4	5	4	2	45.00	23.00
118	2	1	10	5	4	4	2	2	2	2	2	3	3	4	2	4	4	35.00	18.00
119	2	1	10	6	1	4	3	4	4	5	2	5	2	1	4	4	4	43.00	21.00
120	2	2	9	5	2	1	5	2	2	1	1	2	1	5	5	2	5	31.00	18.00
121	2	2	9	4	2	1	2	2	4	2	5	4	3	2	5	2	3	35.00	15.00
122	2	1	8	4	4	4	3	4	4	3	2	5	1	4	3	1	4	37.00	20.00
123	2	1	9	5	3	3	4	4	3	5	2	2	3	4	3	3	4	41.00	24.00
124	2	2	10	6	4	4	3	3	4	4	3	3	2	4	4	2	3	38.00	21.00
125	2	1	9	5	2	3	1	2	2	4	3	1	2	5	4	1	3	32.00	18.00
126	2	1	11	6	2	2	4	5	5	5	4	4	4	4	4	4	5	51.00	26.00
127	2	1	10	6	2	3	4	5	5	5	3	5	1	3	5	3	2	41.00	22.00
128	2	1	10	6	4	4	4	4	4	3	3	3	1	3	3	3	3	37.00	20.00
129	2	1	10	5	3	4	3	4	4	3	2	3	2	1	3	2	2	31.00	15.00
130	2	2	11	6	1	4	4	5	4	4	4	1	2	5	3	4	3	42.00	21.00
131	2	1	11	6	1	4	2	2	2	3	1	1	1	5	4	5	3	33.00	18.00
132	2	1	11	6	3	1	1	2	2	3	1	3	2	2	3	1	3	24.00	13.00
133	2	1	10	6	2	4	5	4	4	5	4	3	2	5	4	4	4	46.00	24.00
134	2	1	10	6	3	4	4	4	4	4	3	2	4	4	4	3	5	45.00	25.00
135	2	1	10	5	2	4	5	4	4	5	4	1	3	2	5	4	5	46.00	28.00
136	2	1	9	5	2	3	3	1	2	2	3	4	1	1	4	4	3	31.00	17.00
137	2	1	10	5	1	4	3	4	4	4	2	4	2	5	4	3	3	40.00	20.00
138	2	2	11	6	1	3	4	2	2	3	4	4	2	3	3	4	5	40.00	21.00
139	2	2	10	5	3	5	4	4	1	5	2	3	4	5	5	5	5	49.00	29.00
140	2	2	10	5	4	5	5	5	5	5	5	4	4	5	5	4	5	57.00	29.00

141	2	2	10	5	2	5	5	5	5	5	4	4	4	4	5	4	4	3	5	53.00	29.00	24.00
142	2	2	10	5	3	1	5	3	4	5	4	4	3	3	3	4	5	3	4	44.00	23.00	21.00
143	2	1	11	6	3	3	3	3	3	3	3	1	3	3	3	3	3	2	5	35.00	20.00	15.00
144	2	2	10	6	3	5	4	4	5	3	4	4	2	5	5	5	3	3	5	48.00	27.00	21.00
145	2	1	10	6	2	5	5	4	5	3	4	4	2	3	5	3	3	3	4	46.00	25.00	21.00
146	2	1	10	6	4	3	2	4	4	5	2	2	2	1	3	3	4	3	2	35.00	16.00	19.00
147	2	2	11	6	4	3	2	4	4	3	2	2	2	2	3	3	5	3	3	36.00	19.00	17.00
148	2	2	11	6	4	4	4	3	4	4	3	2	3	3	3	3	4	4	3	40.00	22.00	18.00
149	2	1	10	6	4	3	3	4	4	4	4	1	3	2	5	4	4	2	3	38.00	19.00	19.00
150	2	1	10	6	1	3	4	2	3	4	4	4	2	3	4	4	3	4	5	41.00	21.00	20.00
151	2	2	11	6	1	5	4	5	3	5	3	5	3	2	3	5	4	5	4	48.00	23.00	25.00
152	3	1	9	4	2	4	5	3	3	5	2	1	2	3	5	4	4	3	4	41.00	25.00	16.00
153	3	2	9	4	3	3	3	4	3	3	3	1	3	3	3	3	3	3	3	35.00	18.00	17.00
154	3	1	9	4	2	4	1	5	3	3	3	5	4	3	2	4	2	4	4	40.00	19.00	21.00
155	3	2	9	4	4	5	5	5	3	3	1	1	1	5	3	5	1	4	4	43.00	29.00	14.00
156	3	1	9	4	1	4	1	1	5	2	2	4	4	1	5	5	5	5	5	40.00	21.00	19.00
157	3	1	9	4	2	3	3	3	3	3	3	3	3	3	5	3	3	5	5	42.00	22.00	20.00
158	3	1	9	4	2	3	1	3	4	3	3	3	3	2	3	3	3	3	4	35.00	17.00	18.00
159	3	2	9	4	4	3	4	5	4	4	2	2	2	1	4	4	4	2	3	36.00	19.00	17.00
160	3	2	8	4	2	3	2	4	4	4	2	3	3	2	4	4	5	3	4	39.00	20.00	19.00
161	3	1	9	4	2	4	4	4	4	4	2	4	2	4	4	4	4	4	4	44.00	24.00	20.00
162	3	2	8	4	4	5	4	4	4	5	3	5	3	4	4	3	5	4	5	50.00	28.00	22.00
163	3	1	8	4	4	3	3	3	4	3	4	1	3	1	5	3	3	1	3	34.00	16.00	18.00
164	3	1	9	4	2	2	3	1	5	3	1	3	1	4	4	1	5	3	5	36.00	24.00	12.00
165	3	1	9	4	2	4	3	2	4	4	4	3	2	3	4	3	4	2	3	37.00	20.00	17.00
166	3	2	9	4	4	3	2	4	4	4	3	2	2	2	3	3	5	3	3	36.00	19.00	17.00
167	3	1	9	4	4	4	5	4	4	4	3	2	3	3	4	4	5	3	4	44.00	25.00	19.00
168	3	2	8	4	2	5	3	3	5	3	3	3	5	5	3	5	5	3	5	48.00	28.00	20.00
169	3	1	9	4	4	4	4	5	4	4	3	1	2	3	3	3	4	3	4	40.00	24.00	16.00
170	3	1	9	4	2	4	2	4	5	3	4	5	3	4	5	1	5	1	5	40.00	22.00	18.00
171	3	2	9	4	4	4	5	2	4	4	2	5	3	3	2	4	5	3	4	43.00	24.00	19.00
172	3	1	9	4	4	4	5	4	5	4	4	2	1	4	4	4	5	4	4	46.00	27.00	19.00
173	3	2	9	4	4	4	5	2	4	4	2	5	3	3	2	4	5	3	4	43.00	24.00	19.00
174	3	2	9	4	1	1	1	2	5	1	2	1	4	4	5	5	5	5	3	35.00	19.00	16.00
175	3	1	9	5	2	3	4	3	5	4	3	2	4	4	3	5	3	3	5	44.00	26.00	18.00
176	3	2	10	5	4	3	2	4	4	4	3	2	2	3	5	4	4	4	4	40.00	20.00	20.00
177	3	1	9	5	2	4	4	5	5	4	5	4	5	4	3	4	4	3	5	50.00	25.00	25.00
178	3	1	9	5	4	4	3	4	3	3	3	3	3	3	4	4	3	4	4	41.00	20.00	21.00
179	3	2	10	5	3	2	4	1	4	1	1	1	5	4	1	5	1	5	5	31.00	21.00	10.00
180	3	2	10	5	2	5	4	4	4	4	3	3	3	3	4	3	5	4	4	46.00	26.00	20.00
181	3	2	10	5	2	4	5	5	5	5	4	3	3	3	3	3	4	5	5	49.00	26.00	23.00
182	3	2	9	5	1	3	4	4	3	3	4	4	2	2	3	3	5	4	3	41.00	21.00	20.00

225	3	1	10	6	4	4	3	5	5	3	1	2	2	3	5	5	2	5	43.00	25.00	18.00
226	3	1	11	6	3	3	2	3	2	1	2	3	4	3	1	3	2	2	25.00	13.00	12.00
227	3	2	11	6	3	2	5	4	3	4	5	4	4	3	3	5	3	4	45.00	19.00	26.00
228	3	1	11	6	1	4	2	2	3	2	1	2	2	2	2	5	3	3	32.00	17.00	15.00
229	3	2	11	6	2	4	4	4	4	4	5	4	4	3	3	5	5	4	51.00	24.00	27.00
230	3	2	11	6	3	4	5	5	4	2	5	1	1	3	3	5	3	5	47.00	26.00	21.00
231	3	2	11	6	3	3	3	3	3	4	1	1	1	4	2	4	3	2	30.00	15.00	15.00
232	3	2	10	6	4	3	3	4	5	3	4	4	4	3	4	5	3	4	47.00	24.00	23.00
233	3	1	11	6	4	3	4	4	2	2	1	3	3	2	4	3	4	2	34.00	19.00	15.00
234	3	1	11	6	2	4	5	4	4	5	2	3	3	4	4	3	5	4	48.00	27.00	21.00
235	3	2	10	6	2	4	5	3	4	4	1	2	4	4	4	5	4	1	43.00	26.00	17.00
236	3	1	11	6	2	3	2	4	1	3	2	1	1	2	2	4	5	2	31.00	15.00	16.00
237	3	2	10	6	3	3	4	4	2	2	3	3	3	2	2	3	3	1	35.00	18.00	17.00
238	3	1	10	6	1	4	3	4	4	5	5	2	2	1	1	5	4	3	43.00	22.00	21.00
239	3	1	10	6	3	5	1	2	4	1	1	1	1	1	2	5	2	1	26.00	17.00	9.00
240	3	2	10	6	2	3	4	2	5	3	3	2	2	2	2	5	5	3	41.00	23.00	18.00
241	3	2	11	6	2	2	4	5	5	5	5	1	1	3	1	5	5	1	40.00	18.00	22.00
242	3	1	10	6	4	4	3	5	5	3	1	3	3	2	2	5	5	4	43.00	22.00	21.00
243	3	1	11	6	1	4	3	3	3	2	3	3	3	2	4	4	5	4	39.00	20.00	19.00
244	3	1	10	6	2	4	5	4	5	1	1	1	1	3	3	5	5	1	40.00	27.00	13.00
245	3	1	11	6	2	5	5	5	5	1	1	5	5	5	5	4	4	3	49.00	29.00	20.00
246	3	1	10	6	4	5	5	5	5	3	3	3	3	2	2	5	5	4	50.00	27.00	23.00
247	3	2	10	6	2	4	5	4	5	5	3	4	4	4	4	5	4	3	48.00	26.00	22.00
248	3	2	10	6	1	1	1	1	1	5	1	1	1	4	4	5	5	3	33.00	19.00	14.00
249	3	1	10	6	2	3	3	3	3	1	3	4	4	3	3	4	5	3	38.00	18.00	20.00
250	3	2	11	6	4	3	3	5	4	3	3	2	2	2	3	4	4	3	38.00	19.00	19.00
251	3	1	10	6	2	4	5	4	5	3	3	3	3	4	4	5	5	5	51.00	28.00	23.00
252	3	2	10	6	4	2	3	5	5	1	1	1	3	1	1	5	5	2	38.00	21.00	17.00
253	3	2	10	6	4	3	2	4	4	3	5	3	3	3	3	4	5	3	44.00	22.00	22.00
254	3	2	11	6	4	4	5	2	3	3	2	2	3	4	4	4	5	2	41.00	25.00	16.00
255	3	1	10	6	3	3	3	3	3	5	1	3	2	3	3	3	5	3	39.00	24.00	15.00
256	3	1	10	6	2	4	5	3	5	1	1	1	1	1	1	5	4	3	36.00	22.00	14.00

Appendix I

Raw Data Key

Id	Participant identification number
School	1 = Samson Primary School 2 = East Hamilton Hill Primary School 3 = Christ the King School
Gender	1 = Male, 2 = Female
Age	Participant's age
Grade	Participant's year of schooling
Status	1 = Bully, 2 = Victim, 3 = Bully/Victim, 4 = Not Involved
q1aff – q12aff	Questions 1-12 of the F&T scale (aff refers to a question loading on the affective empathy factor, cog refers to a question loading on the cognitive empathy factor) 1 = Not like me at all 2 = Hardly ever like me 3 = Occasionally like me 4 = Fairly like me 5 = Very like me
Empathy	Summed scores on all F&T responses to denote Overall Empathy Possible range of scores = 12 to 60
Affect	Summed scores on all Affective F&T questions (Questions 1, 2, 4, 8, 10, and 12)
Cognit	Summed scores on all Cognitive F&T questions (Questions 3, 5, 6, 7, 9, and 11)

Appendix J

Statistical Analysis Output

Normality testing – ANOVA

Tests of Normality - Males							
	Bully Status	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Overall Empathy	bully	.252	15	.011	.883	15	.052
	victim	.105	53	.200(*)	.991	53	.963
	bully/victim	.110	24	.200(*)	.960	24	.431
	not involved	.100	38	.200(*)	.985	38	.882

* This is a lower bound of the true significance.
a Lilliefors Significance Correction

Tests of Normality - Females							
	Bully Status	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Overall Empathy	bully	.160	10	.200(*)	.930	10	.449
	victim	.144	32	.088	.956	32	.210
	bully/victim	.157	16	.200(*)	.933	16	.268
	not involved	.121	53	.051	.947	53	.019

* This is a lower bound of the true significance.
a Lilliefors Significance Correction

Normality testing – MANOVA

Tests of Normality – Males - Cognitive							
	Bully Status	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Cognitive Empathy	bully	.252	15	.011	.909	15	.132
	victim	.096	53	.200(*)	.979	53	.487
	bully/victim	.114	24	.200(*)	.971	24	.691
	not involved	.112	38	.200(*)	.983	38	.824

* This is a lower bound of the true significance.
a Lilliefors Significance Correction

Tests of Normality – Females - Cognitive							
	Bully Status	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Cognitive Empathy	bully	.129	10	.200(*)	.928	10	.432
	victim	.169	32	.020	.961	32	.297
	bully/victim	.126	16	.200(*)	.954	16	.550
	not involved	.143	53	.008	.946	53	.019

* This is a lower bound of the true significance.
a Lilliefors Significance Correction

Tests of Normality – Males - Affective

	Bully Status	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Affective Empathy	bully	.190	15	.148	.908	15	.127
	victim	.079	53	.200(*)	.970	53	.208
	bully/victim	.189	24	.026	.927	24	.083
	not involved	.106	38	.200(*)	.968	38	.337

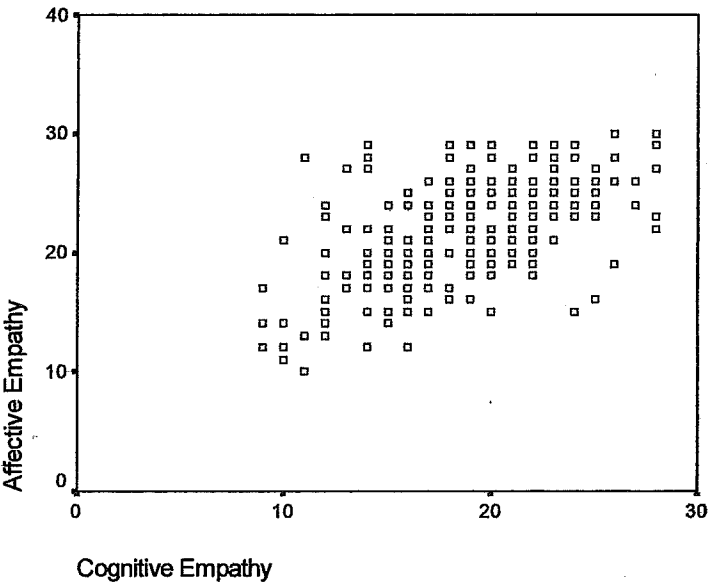
* This is a lower bound of the true significance.
a Lilliefors Significance Correction

Tests of Normality – Females - Affective

	Bully Status	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Affective Empathy	bully	.289	10	.018	.860	10	.076
	victim	.141	32	.104	.937	32	.061
	bully/victim	.121	16	.200(*)	.980	16	.964
	not involved	.098	53	.200(*)	.966	53	.134

* This is a lower bound of the true significance.
a Lilliefors Significance Correction

Linearity – MANOVA



Descriptive Statistics

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	130	53.9	53.9	53.9
	female	111	46.1	46.1	100.0
	Total	241	100.0	100.0	

Bully Status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	bully	25	10.4	10.4	10.4
	victim	85	35.3	35.3	45.6
	bully/victim	40	16.6	16.6	62.2
	not involved	91	37.8	37.8	100.0
	Total	241	100.0	100.0	

Pearson Chi-Square

Bully Status * Gender Crosstabulation

			Gender		Total
			male	female	
Bully Status	Bully	Count	15	10	25
		Expected Count	13.5	11.5	25.0
		% within Bully Status	60.0%	40.0%	100.0%
		% within Gender	11.5%	9.0%	10.4%
		% of Total	6.2%	4.1%	10.4%
	Victim	Count	53	32	85
		Expected Count	45.9	39.1	85.0
		% within Bully Status	62.4%	37.6%	100.0%
		% within Gender	40.8%	28.8%	35.3%
		% of Total	22.0%	13.3%	35.3%
	bully/victim	Count	24	16	40
		Expected Count	21.6	18.4	40.0
		% within Bully Status	60.0%	40.0%	100.0%
		% within Gender	18.5%	14.4%	16.6%
		% of Total	10.0%	6.6%	16.6%
	not involved	Count	38	53	91
		Expected Count	49.1	41.9	91.0
		% within Bully Status	41.8%	58.2%	100.0%
		% within Gender	29.2%	47.7%	37.8%
		% of Total	15.8%	22.0%	37.8%
Total	Count	130	111	241	
	Expected Count	130.0	111.0	241.0	
	% within Bully Status	53.9%	46.1%	100.0%	
	% within Gender	100.0%	100.0%	100.0%	
	% of Total	53.9%	46.1%	100.0%	

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.818(a)	3	.032
Likelihood Ratio	8.844	3	.031
Linear-by-Linear Association	6.764	1	.009
N of Valid Cases	241		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.51.

ANOVA

Levene's Test of Equality of Error Variances(a)

Dependent Variable: Overall Empathy

F	df1	df2	Sig.
1.799	7	233	.088

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a Design: Intercept+GENDER+STATUS+GENDER * STATUS

Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power(a)
Corrected Model	2243.867(b)	7	320.552	6.746	.000	.169	47.225	1.000
Intercept	278701.191	1	278701.191	5865.642	.000	.962	5865.642	1.000
GENDER	885.456	1	885.456	18.636	.000	.074	18.636	.990
STATUS	859.019	3	286.340	6.026	.001	.072	18.079	.957
GENDER * STATUS	19.622	3	6.541	.138	.937	.002	.413	.075
Error	11070.805	233	47.514					
Total	407037.000	241						
Corrected Total	13314.672	240						

Dependent Variable: Overall Empathy

a Computed using alpha = .05

b R Squared = .169 (Adjusted R Squared = .144)

Estimated Marginal Means

1. Gender

Dependent Variable: Overall Empathy

Gender	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
male	37.679	.675	36.349	39.010
female	42.181	.795	40.615	43.746

2. Bully Status

Dependent Variable: Overall Empathy

Bully Status	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
bully	40.167	1.407	37.395	42.939
victim	41.881	.772	40.361	43.401
bully/victim	36.385	1.112	34.194	38.577
not involved	41.287	.733	39.844	42.730

3. Gender * Bully Status

Dependent Variable: Overall Empathy

Gender	Bully Status	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
male	bully	38.133	1.780	34.627	41.640
	victim	39.981	.947	38.116	41.847
	bully/victim	33.708	1.407	30.936	36.480
	not involved	38.895	1.118	36.692	41.098
female	bully	42.200	2.180	37.905	46.495
	victim	43.781	1.219	41.381	46.182
	bully/victim	39.063	1.723	35.667	42.458
	not involved	43.679	.947	41.814	45.545

Post Hoc Comparisons

Descriptive Statistics

Dependent Variable: Overall Empathy

Bully Status	Mean	Std. Deviation	N
bully	39.7600	4.94368	25
victim	41.4118	7.49650	85
bully/victim	35.8500	7.80713	40
not involved	41.6813	7.11474	91
Total	40.4191	7.44834	241

Levene's Test of Equality of Error Variances(a)

Dependent Variable: Overall Empathy

F	df1	df2	Sig.
2.576	3	237	.055

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.
a Design: Intercept+STATUS

Tests of Between-Subjects Effects

Dependent Variable: Overall Empathy

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power(a)
Corrected Model	1074.666(b)	3	358.222	6.936	.000	.081	20.808	.978
Intercept	287015.406	1	287015.406	5557.403	.000	.959	5557.403	1.000
STATUS	1074.666	3	358.222	6.936	.000	.081	20.808	.978
Error	12240.006	237	51.646					
Total	407037.000	241						
Corrected Total	13314.672	240						

a Computed using alpha = .05
b R Squared = .081 (Adjusted R Squared = .069)

Post Hoc Tests
Bully Status

Multiple Comparisons

Dependent Variable: Overall Empathy

	(I) Bully Status	(J) Bully Status	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	bully	Victim	-1.6518	1.63506	.744	-5.8822	2.5787
		bully/victim	3.9100	1.83220	.145	-.8305	8.6505
		not involved	-1.9213	1.62276	.638	-6.1200	2.2773
	victim	bully	1.6518	1.63506	.744	-2.5787	5.8822
		bully/victim	5.5618(*)	1.37795	.000	1.9965	9.1270
		not involved	-.2696	1.08403	.995	-3.0743	2.5352
	bully/victim	bully	-3.9100	1.83220	.145	-8.6505	.8305
		victim	-5.5618(*)	1.37795	.000	-9.1270	-1.9965
		not involved	-5.8313(*)	1.36333	.000	-9.3587	-2.3039
	not involved	bully	1.9213	1.62276	.638	-2.2773	6.1200
		victim	.2696	1.08403	.995	-2.5352	3.0743
		bully/victim	5.8313(*)	1.36333	.000	2.3039	9.3587
Scheffe	bully	victim	-1.6518	1.63506	.796	-6.2556	2.9520

	bully/victim	3.9100	1.83220	.210	-1.2489	9.0689
	not involved	-1.9213	1.62276	.705	-6.4905	2.6479
victim	bully	1.6518	1.63506	.796	-2.9520	6.2556
	bully/victim	5.5618(*)	1.37795	.001	1.6819	9.4416
	not involved	-.2696	1.08403	.996	-3.3218	2.7827
bully/victim	bully	-3.9100	1.83220	.210	-9.0689	1.2489
	victim	-5.5618(*)	1.37795	.001	-9.4416	-1.6819
	not involved	-5.8313(*)	1.36333	.001	-9.6700	-1.9926
not involved	bully	1.9213	1.62276	.705	-2.6479	6.4905
	victim	.2696	1.08403	.996	-2.7827	3.3218
	bully/victim	5.8313(*)	1.36333	.001	1.9926	9.6700

Based on observed means.

* The mean difference is significant at the .05 level.

Homogeneous Subsets

Overall Empathy

	Bully Status	N	Subset	
			1	2
Tukey HSD(a,b,c)	bully/victim	40	35.8500	
	Bully	25		39.7600
	Victim	85		41.4118
	not involved	91		41.6813
	Sig.		1.000	.579
Scheffe(a,b, c)	bully/victim	40	35.8500	
	Bully	25	39.7600	39.7600
	Victim	85		41.4118
	not involved	91		41.6813
	Sig.		.083	.653

Means for groups in homogeneous subsets are displayed. Based on Type III Sum of Squares The error term is Mean Square(Error) = 51.646.

a Uses Harmonic Mean Sample Size = 45.582.

b The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c Alpha = .05.

MANOVA

Box's Test of Equality of Covariance Matrices(a)

Box's M	58.156
F	2.657
df1	21
df2	25132.407
Sig.	.000

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

a Design: Intercept+STATUS+GENDER+STATUS * GENDER

Bartlett's Test of Sphericity(a)

Likelihood Ratio	.000
Approx. Chi-Square	69.785
df	2
Sig.	.000

Tests the null hypothesis that the residual covariance matrix is proportional to an identity matrix.

a Design: Intercept+STATUS+GENDER+STATUS * GENDER

Multivariate Tests(d)

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power(a)
Intercept	Pillai's Trace	2929.779(b)	2.000	232.000	.000	.962	5859.558	1.000
	Wilks' Lambda	2929.779(b)	2.000	232.000	.000	.962	5859.558	1.000
	Hotelling's Trace	2929.779(b)	2.000	232.000	.000	.962	5859.558	1.000
	Roy's Largest Root	2929.779(b)	2.000	232.000	.000	.962	5859.558	1.000
STATUS	Pillai's Trace	4.114	6.000	466.000	.000	.050	24.684	.977
	Wilks' Lambda	4.138(b)	6.000	464.000	.000	.051	24.825	.977
	Hotelling's Trace	4.161	6.000	462.000	.000	.051	24.965	.978
	Roy's Largest Root	6.803(c)	3.000	233.000	.000	.081	20.409	.975
GENDER	Pillai's Trace	9.997(b)	2.000	232.000	.000	.079	19.995	.984
	Wilks' Lambda	9.997(b)	2.000	232.000	.000	.079	19.995	.984
	Hotelling's Trace	9.997(b)	2.000	232.000	.000	.079	19.995	.984
	Roy's Largest Root	9.997(b)	2.000	232.000	.000	.079	19.995	.984
STATUS * GENDER	Pillai's Trace	.099	6.000	466.000	.996	.001	.594	.074
	Wilks' Lambda	.099(b)	6.000	464.000	.997	.001	.591	.074
	Hotelling's Trace	.098	6.000	462.000	.997	.001	.589	.074
	Roy's Largest Root	.158(c)	3.000	233.000	.925	.002	.473	.079

a Computed using alpha = .05

b Exact statistic

c The statistic is an upper bound on F that yields a lower bound on the significance level.

d Design: Intercept+STATUS+GENDER+STATUS*GENDER

Levene's Test of Equality of Error Variances(a)

	F	df1	df2	Sig.
Affective Empathy	3.643	7	233	.001
Cognitive Empathy	1.878	7	233	.074

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a Design: Intercept+STATUS+GENDER+STATUS*GENDER

Univariate F for MANOVA

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power(a)
Corrected Model	Affective Empathy	623.051(b)	7	89.007	5.424	.000	.140	37.970	.998
	Cognitive Empathy	565.483(c)	7	80.783	5.350	.000	.138	37.451	.998
Intercept	Affective Empathy	78314.790	1	78314.790	4772.620	.000	.953	4772.620	1.000
	Cognitive Empathy	61540.600	1	61540.600	4075.718	.000	.946	4075.718	1.000
STATUS	Affective Empathy	331.766	3	110.589	6.739	.000	.080	20.218	.974
	Cognitive Empathy	157.154	3	52.385	3.469	.017	.043	10.408	.772
GENDER	Affective Empathy	167.040	1	167.040	10.180	.002	.042	10.180	.888
	Cognitive Empathy	283.324	1	283.324	18.764	.000	.075	18.764	.991
STATUS * GENDER	Affective Empathy	4.035	3	1.345	.082	.970	.001	.246	.065
	Cognitive Empathy	7.084	3	2.361	.156	.926	.002	.469	.079
Error	Affective Empathy	3823.339	233	16.409					
	Cognitive Empathy	3518.143	233	15.099					
Total	Affective Empathy	117164.000	241						
	Cognitive Empathy	89195.000	241						
Corrected Total	Affective Empathy	4446.390	240						
	Cognitive Empathy	4083.627	240						

a Computed using alpha = .05
b R Squared = .140 (Adjusted R Squared = .114)
c R Squared = .138 (Adjusted R Squared = .113)

Residual SSCP Matrix

	Affective Empathy	Cognitive Empathy
Sum-of-Squares and Cross-Products	3823.339	1864.661
Covariance	1864.661	3518.143
	16.409	8.003
	8.003	15.099
Correlation	1.000	.508
	.508	1.000

Based on Type III Sum of Squares

Estimates - Gender

Dependent Variable	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Affective Empathy	male	20.189	.397	19.407	20.971
	female	22.144	.467	21.224	23.064
Cognitive Empathy	male	17.490	.381	16.740	18.240
	Female	20.037	.448	19.154	20.919

Estimates – Bully Status

Dependent Variable	Bully Status	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Affective Empathy	Bully	20.567	.827	18.938	22.196
	Victim	22.587	.453	21.693	23.480
	bully/victim	19.323	.654	18.035	20.611
	not involved	22.190	.431	21.342	23.039
Cognitive Empathy	Bully	19.600	.793	18.037	21.163
	Victim	19.295	.435	18.438	20.151
	bully/victim	17.063	.627	15.827	18.298
	not involved	19.097	.413	18.283	19.910

Post hoc comparisons – Bully Status

Pairwise Comparisons

Dependent Variable	(I) Bully Status	(J) Bully Status	Mean Difference (I-J)	Std. Error	Sig.(a)	95% Confidence Interval for Difference(a)	
						Lower Bound	Upper Bound
Affective Empathy	bully	victim	-2.020(*)	.943	.033	-3.878	-.162
		bully/victim	1.244	1.054	.239	-.833	3.320
		Not involved	-1.624	.932	.083	-3.460	.213
	victim	bully	2.020(*)	.943	.033	.162	3.878
		bully/victim	3.264(*)	.796	.000	1.696	4.831
		not involved	.396	.625	.527	-.836	1.628
	bully/victim	bully	-1.244	1.054	.239	-3.320	.833
		victim	-3.264(*)	.796	.000	-4.831	-1.696
		not involved	-2.868(*)	.783	.000	-4.410	-1.325
	not involved	bully	1.624	.932	.083	-.213	3.460
		victim	-.396	.625	.527	-1.628	.836
		bully/victim	2.868(*)	.783	.000	1.325	4.410
Cognitive Empathy	bully	victim	.305	.905	.736	-1.477	2.088
		bully/victim	2.537(*)	1.011	.013	.545	4.530
		not involved	.503	.894	.574	-1.258	2.265
	victim	bully	-.305	.905	.736	-2.088	1.477
		bully/victim	2.232(*)	.763	.004	.728	3.736
		not involved	.198	.600	.742	-.984	1.380
	bully/victim	bully	-2.537(*)	1.011	.013	-4.530	-.545
		victim	-2.232(*)	.763	.004	-3.736	-.728
		not involved	-2.034(*)	.751	.007	-3.513	-.555
	not involved	bully	-.503	.894	.574	-2.265	1.258
		victim	-.198	.600	.742	-1.380	.984
		bully/victim	2.034(*)	.751	.007	.555	3.513

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Factor Analysis

Correlation Matrix												
Correlation	Empathy Q1 - Affective	Empathy Q2 - Affective	Empathy Q3 - Cognitive	Empathy Q4 - Affective	Empathy Q5 - Cognitive	Empathy Q6 - Cognitive	Empathy Q7 - Cognitive	Empathy Q8 - Affective	Empathy Q9 - Cognitive	Empathy Q10 - Affective	Empathy Q11 - Cognitive	Empathy Q12 - Affective
Empathy Q1 - Affective	1.000	.331	.307	.306	.216	.125	.285	.177	.160	.134	.267	.375
Empathy Q2 - Affective	.331	1.000	.302	.221	.330	.187	.222	.365	.070	.180	.136	.411
Empathy Q3 - Cognitive	.307	.302	1.000	.191	.285	.280	.131	.096	.205	.144	.093	.188
Empathy Q4 - Affective	.306	.221	.191	1.000	.188	.085	.189	.228	.302	.338	.291	.289
Empathy Q5 - Cognitive	.216	.330	.285	.188	1.000	.216	.321	.332	.070	.101	.227	.235
Empathy Q6 - Cognitive	.125	.187	.280	.085	.216	1.000	.279	.118	.005	.032	.174	.175
Empathy Q7 - Cognitive	.285	.222	.131	.189	.321	.279	1.000	.363	.086	.168	.201	.407
Empathy Q8 - Affective	.177	.365	.096	.228	.332	.118	.363	1.000	.082	.129	.280	.466
Empathy Q9 - Cognitive	.160	.070	.205	.302	.070	.005	.086	.082	1.000	.107	.200	.174
Empathy Q10 - Affective	.134	.180	.144	.338	.101	.032	.168	.129	.107	1.000	.157	.327
Empathy Q11 - Cognitive	.267	.136	.093	.291	.227	.174	.201	.280	.200	.157	1.000	.298
Empathy Q12 - Affective	.375	.411	.188	.289	.235	.175	.407	.466	.174	.327	.298	1.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.783
Bartlett's Test of Sphericity	529.381
Approx. Chi-Square Df	66
Sig.	.000

Anti-Image Matrices

	Empathy Q1 - Affective	Empathy Q2 - Affective	Empathy Q3 - Cognitive	Empathy Q4 - Affective	Empathy Q5 - Cognitive	Empathy Q6 - Cognitive	Empathy Q7 - Cognitive	Empathy Q8 - Affective	Empathy Q9 - Cognitive	Empathy Q10 - Affective	Empathy Q11 - Cognitive	Empathy Q12 - Affective
Anti-Image Covariance												
Empathy Q1 - Affective	.716	-.113	-.145	-.116	-.005	.050	-.105	.075	-.001	.062	-.111	-.121
Empathy Q2 - Affective	-.113	.692	-.109	-.028	-.117	-.048	.044	-.131	.038	-.031	.084	-.126
Empathy Q3 - Cognitive	-.145	-.109	.753	-.015	-.135	-.185	.049	.038	-.139	-.061	.081	.008
Empathy Q4 - Affective	-.116	-.028	-.015	.727	-.027	-.001	-.001	-.055	-.178	-.201	-.100	-.003
Empathy Q5 - Cognitive	-.005	-.117	-.135	-.027	.751	-.043	-.131	-.117	.025	.012	-.085	.041
Empathy Q6 - Cognitive	.050	-.048	-.185	-.001	-.043	.830	-.162	.043	.073	.058	-.105	-.028
Empathy Q7 - Cognitive	-.105	.044	.049	-.001	-.131	-.162	.710	-.121	-.011	-.043	.019	-.125
Empathy Q8 - Affective	.075	-.131	.038	-.055	-.117	.043	-.121	.661	.021	.057	-.102	-.177
Empathy Q9 - Cognitive	-.001	.038	-.139	-.178	.025	.073	-.011	.021	.858	.029	-.098	-.056
Empathy Q10 - Affective	.062	-.031	-.061	-.201	.012	.058	-.043	.057	.029	.812	-.031	-.156
Empathy Q11 - Cognitive	-.111	.064	.061	-.100	-.085	-.105	.019	-.102	-.098	-.031	.791	-.064
Empathy Q12 - Affective	-.121	-.126	.008	-.003	.041	-.028	-.125	-.177	-.056	-.156	-.064	.575
Anti-Image Correlation												
Empathy Q1 - Affective	.791(a)	-.161	-.197	-.160	-.007	.065	-.148	.110	-.001	.082	-.148	-.188
Empathy Q2 - Affective	-.161	.822(a)	-.151	-.039	-.162	-.064	.063	-.193	.049	-.042	.087	-.200
Empathy Q3 - Cognitive	-.197	-.151	.721(a)	-.020	-.180	-.234	.067	.054	-.173	-.077	.079	.012
Empathy Q4 - Affective	-.160	-.039	-.020	.799(a)	-.037	-.002	-.002	-.080	-.225	-.261	-.132	-.005
Empathy Q5 - Cognitive	-.007	-.162	-.180	-.037	.824(a)	-.055	-.179	-.167	.031	.015	-.111	.062
Empathy Q6 - Cognitive	.065	-.064	-.234	-.002	-.055	.699(a)	-.211	.058	.087	.070	-.130	-.040
Empathy Q7 - Cognitive	-.148	.063	.067	-.002	-.055	-.211	.803(a)	.058	.087	.070	-.130	-.040
Empathy Q8 - Affective	.110	-.193	.054	-.080	-.167	.058	-.177	.777(a)	-.014	-.056	.026	-.196
Empathy Q9 - Cognitive	-.001	.049	-.173	-.225	.031	.087	-.014	.028	.699(a)	.078	-.140	-.286
Empathy Q10 - Affective	.082	-.042	-.077	-.261	.015	.070	-.056	.078	.035	.716(a)	-.039	-.080
Empathy Q11 - Cognitive	-.148	.087	.079	-.132	-.111	-.130	.026	-.140	.035	-.039	-.039	-.228
Empathy Q12 - Affective	-.188	-.200	.012	-.005	.062	-.040	-.196	-.286	-.080	-.228	-.095	.807(a)

a Measures of Sampling Adequacy(MSA)

Principal Components Analysis

Communalities

	Initial	Extraction
Empathy Q1 – Affective	1.000	.399
Empathy Q2 – Affective	1.000	.426
Empathy Q3 - Cognitive	1.000	.710
Empathy Q4 – Affective	1.000	.568
Empathy Q5 - Cognitive	1.000	.437
Empathy Q6 - Cognitive	1.000	.477
Empathy Q7 - Cognitive	1.000	.475
Empathy Q8 – Affective	1.000	.618
Empathy Q9 - Cognitive	1.000	.512
Empathy Q10 - Affective	1.000	.367
Empathy Q11 - Cognitive	1.000	.318
Empathy Q12 - Affective	1.000	.604

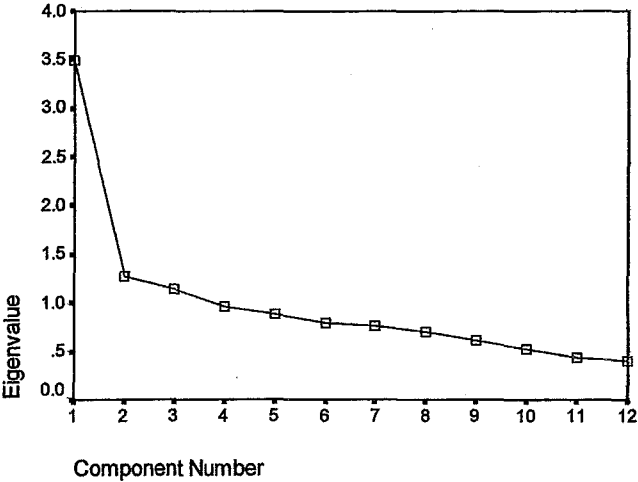
Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.495	29.122	29.122	3.495	29.122	29.122
2	1.278	10.650	39.771	1.278	10.650	39.771
3	1.137	9.479	49.250	1.137	9.479	49.250
4	.960	8.002	57.252			
5	.885	7.376	64.628			
6	.800	6.667	71.295			
7	.760	6.333	77.628			
8	.702	5.848	83.475			
9	.614	5.117	88.593			
10	.529	4.406	92.999			
11	.440	3.670	96.669			
12	.400	3.331	100.000			

Extraction Method: Principal Component Analysis.

Scree Plot



Component Matrix(a)

	Component		
	1	2	3
Empathy Q12 – Affective	.718		-.297
Empathy Q2 – Affective	.615	-.214	
Empathy Q8 – Affective	.603	-.197	-.464
Empathy Q1 – Affective	.592		.199
Empathy Q7 – Cognitive	.590	-.274	-.227
Empathy Q5 – Cognitive	.559	-.343	
Empathy Q4 – Affective	.558	.506	
Empathy Q11 – Cognitive	.511	.195	-.139
Empathy Q10 – Affective	.418	.407	-.164
Empathy Q9 – Cognitive	.327	.570	.283
Empathy Q6 – Cognitive	.383	-.450	.357
Empathy Q3 – Cognitive	.475		.692

Extraction Method: Principal Component Analysis.
a 3 components extracted.

Principal Axis Factoring

Communalities

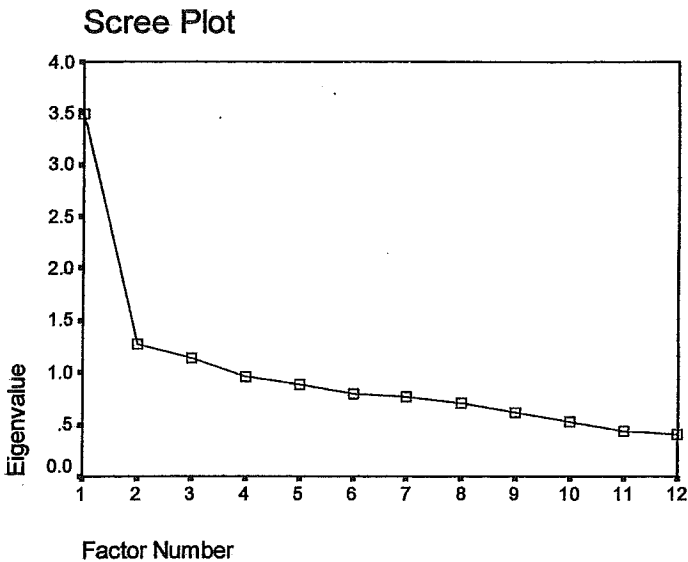
	Initial	Extraction
Empathy Q1 – Affective	.284	.285
Empathy Q2 – Affective	.308	.328
Empathy Q3 – Cognitive	.247	.679
Empathy Q4 – Affective	.273	.488
Empathy Q5 – Cognitive	.249	.293
Empathy Q6 – Cognitive	.170	.177
Empathy Q7 – Cognitive	.290	.337
Empathy Q8 – Affective	.339	.439
Empathy Q9 – Cognitive	.142	.190
Empathy Q10 – Affective	.188	.184
Empathy Q11 – Cognitive	.209	.217
Empathy Q12 – Affective	.425	.515

Extraction Method: Principal Axis Factoring.

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.495	29.122	29.122	2.872	23.936	23.936	1.812	15.096	15.096
2	1.278	10.650	39.771	.672	5.602	29.538	1.272	10.597	25.693
3	1.137	9.479	49.250	.587	4.888	34.427	1.048	8.734	34.427
4	.960	8.002	57.252						
5	.885	7.376	64.628						
6	.800	6.667	71.295						
7	.760	6.333	77.628						
8	.702	5.848	83.475						
9	.614	5.117	88.593						
10	.529	4.406	92.999						
11	.440	3.670	96.669						
12	.400	3.331	100.000						

Extraction Method: Principal Axis Factoring.



Factor Matrix(a)

	Factor		
	1	2	3
Empathy Q12 – Affective	.681		
Empathy Q8 – Affective	.558	-.303	
Empathy Q2 – Affective	.550		
Empathy Q7 – Cognitive	.526		
Empathy Q4 – Affective	.523		.462
Empathy Q1 – Affective	.521		
Empathy Q5 – Cognitive	.492		
Empathy Q11 – Cognitive	.435		
Empathy Q10 – Affective	.356		
Empathy Q6 – Cognitive	.324		
Empathy Q3 – Cognitive	.481	.667	
Empathy Q9 – Cognitive			.321

Extraction Method: Principal Axis Factoring.
a Attempted to extract 3 factors. More than 25 iterations required. (Convergence=.005). Extraction was terminated.

Rotated Factor Matrix(a)

	Factor		
	1	2	3
Empathy Q8 – Affective	.645		
Empathy Q12 – Affective	.613	.362	
Empathy Q7 – Cognitive	.550		
Empathy Q2 – Affective	.453		.304
Empathy Q5 – Cognitive	.434		.312
Empathy Q4 – Affective		.673	
Empathy Q9 – Cognitive		.422	
Empathy Q10 – Affective		.389	
Empathy Q1 – Affective	.300	.345	
Empathy Q11 – Cognitive	.315	.340	
Empathy Q3 – Cognitive			.793
Empathy Q6 – Cognitive			.326

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization.
a Rotation converged in 6 iterations.

Guidelines for Authors – Journal of Educational Psychology

Submission.

Authors are now required to submit their manuscripts electronically as well as to send paper copies. Submit manuscripts electronically via the Manuscript Submission Portal. See APA's Checklist for Manuscript Submission for more information, including guidelines for preparing the electronic file. Authors must also submit four paper copies of their manuscript to the Editor.

Karen R. Harris
Vanderbilt University
Journal of Educational Psychology
Box 507 Peabody College
Nashville, TN 37203-5721

General correspondence may be directed to the Editor's Office.

In addition to addresses and phone numbers, authors should supply e-mail addresses, as most communications will be by e-mail. Fax numbers, if available, should also be provided for potential use by the editorial office and later by the production office. Authors should keep a copy of the manuscript to guard against loss.

Preparing files for production.

If your manuscript is accepted for publication, please follow the guidelines for file formats and naming provided at Preparing Your Accepted Manuscript for Production. If your manuscript was mask reviewed, please ensure that the final version for production includes a byline and full author note for typesetting.

Masked review policy.

Because the *Journal* has a masked review policy, authors submitting manuscripts are required to include, with each copy of the manuscript, a cover sheet that shows the title of the manuscript, the authors' names and institutional affiliations, the date the manuscript is submitted, and footnotes identifying the authors or their affiliations. The first page of the manuscript should omit the authors' names and affiliations but should include the title of the manuscript and the date it is submitted. Every effort should be made by the authors to see that the manuscript itself contains no clues to their identities.

Manuscript preparation.

Authors should prepare manuscripts according to the Publication Manual of the American Psychological Association (5th ed.). Manuscripts may be copyedited for bias-free language (see chap. 2 of the Publication Manual). Formatting instructions (all copy must be double-spaced) and instructions on the preparation of tables, figures, references, metrics, and abstracts appear in the Manual. See APA's Checklist for Manuscript Submission.

Abstract and keywords. All manuscripts must include an abstract containing a maximum of 180 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.

References. References should be listed in alphabetical order. Each listed reference

should be cited in text, and each text citation should be listed in the References. Basic formats are as follows:

Haag, L., & Stern, E. (2003). In search of the benefits of learning Latin. *Journal of Educational Psychology*, 95, 174–178.

Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.

Johnson, D. W., & Johnson, R. T. (1990). Cooperative learning and achievement. In S. Sharan (Ed.), *Cooperative learning: Theory and research* (pp. 173–202). New York: Praeger.

Adequate description of participants is critical to the science and practice of educational psychology; this allows readers to assess the results, determine generalizability of findings, and make comparisons in replications, extensions, literature reviews, or secondary data analyses. Authors should see guidelines for sample/subject description in the Manual. Appropriate indexes of effect size or strength of relationship should be incorporated in the results section of the manuscript (see pp. 5, 25–26 of the Manual). Information that allows the reader to assess not only the significance but also the magnitude of the observed effects or relationships clarifies the importance of the findings.

Figures.

Graphics files are welcome if supplied as Tiff, EPS, or PowerPoint. High-quality printouts or glossies are needed for all figures. The minimum line weight for line art is 0.5 point for optimal printing. When possible, please place symbol legends below the figure image instead of to the side. Original color figures can be printed in color at the editor's and publisher's discretion provided the author agrees to pay \$255 for one figure, \$425 for two figures, \$575 for three figures, \$675 for four figures, and \$55 for each additional figure.

Supplemental materials.

APA can now place supplementary materials online, which will be available via the journal's Web page as noted above. To submit such materials, please see Supplementing Your Article With Online Material for details. Authors of accepted papers will be asked to work with the editor and production staff to provide supplementary materials as appropriate.

Permissions.

Authors of accepted papers are required to obtain and provide to the editor on final acceptance all necessary permissions to reproduce in print and electronic form any copyrighted work, including, for example, test materials or portions thereof and photographs of people.

Publication policies.

APA policy prohibits an author from submitting the same manuscript for concurrent consideration by two or more publications. APA's policy regarding posting articles on the Internet may be found at Posting Articles on the Internet. In addition, it is a violation of APA Ethical Principles to publish "as original data, data that have been previously published" (Standard 8.13). As this is a primary journal that publishes original material

only, APA policy prohibits publication of any manuscript or data that have already been published in whole or substantial part elsewhere. Authors have an obligation to consult journal editors concerning prior publication of any data on which their article depends.

In addition, APA Ethical Principles specify that “after research results are published, psychologists do not withhold the data on which their conclusions are based from other competent professionals who seek to verify the substantive claims through reanalysis and who intend to use such data only for that purpose, provided that the confidentiality of the participants can be protected and unless legal rights concerning proprietary data preclude their release” (Standard 8.14). Authors must have available their data throughout the editorial review process and for at least 5 years after the date of publication.

Authors are required to state in writing that they have complied with APA ethical standards in the treatment of their sample, or to describe the details of treatment. A copy of the APA Ethical Principles may be obtained from the APA Ethics Office web site or by writing the APA Ethics Office, 750 First Street, NE, Washington, DC 20002-4242. APA requires authors to reveal any possible conflict of interest in the conduct and reporting of research (e.g., financial interests in a test procedure, funding by pharmaceutical companies for drug research).

Authors of accepted manuscripts will be required to transfer copyright to APA.