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Bullying in Schools : An Extension and Replication of Schoolchildren's Attitudes and Helping Behaviour Toward Victims of Bullying

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Bullying in Schools: An Extension and Replication

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Abstract

A replication and extension of Rigby and Slee's (1991) study, was conducted in rural Western Australia to investigate age and gender differences in schoolchildren's attitudes and behaviour toward victims of bullying. One hundred and seventy two students (93 females, 79 males) participated in the study, comprising of, Year 3, Year 7, Year 8, and Year 12 students. Three written, anonymous questionnaires were used: (i) The Peer Relations Questionnaire (Rigby & Slee, 1994) and (ii) the Pro-Victim Scale (Rigby & Slee, 1991) examined students peer interactions and attitudes toward victims; and a self-developed questionnaire, (iii) theVictim Questionnaire, was used to assess schoolchildren's helping behaviour toward a victim of bullying. Four of the seven hypotheses were supported, these being: the majority of schoolchildren hold supportive attitudes toward victims, girls show more supportive attitudes than boys toward victims, the majority of students act in a pro-social manner toward their peers, and, boys show higher incidence than girls of being victims of direct bullying. The three hypotheses not supported were, Year 3 children show more supportive attitudes than Years 7, 8 and 12 students toward victims, girls show higher incidence than boys of being victims of indirect bullying, and, Year 3 children show more positive forms of helping behaviour toward victims of bullying than Years 7, 8 and 12 students. The results suggested differences between helping behaviour of primary and secondary students particularly, the transition between Year 7 and Year 8. Furthermore, a larger, more representative sample of rural children in the future, should provide more accurate comparisons between urban and rural centres. Such comparisons have implications for the appropriateness or inappropriateness of universal intervention strategies.

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 reference is made in the text.

Signature

Date.................../0/ 5 / 9 ....

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Bullying has always been a problem for many children in school, yet it has

generally been accepted by society as a "normal" part of school life (Oliver, Oaks, &

Hoover, 1994; Olweus, 1993; Tattum, 1989). Bullies select their victims for their

perceived vulnerability, and victims have been found not to inform for fear of

repercussions. Of those children who did complain, prevailing adult attitudes or the

lack of appropriate strategies and knowledge, often led to insufficient support and

deterioration of the situation (Griffiths, 1994).

Bullying has been studied systematically only in the past 20 years, mostly

restricted to the Scandinavian countries (Roland, 1989). Interpretations of research

findings have shown an unacceptably high percentage of students involved in

bullying activities, either as victims, perpetrators or both (Olweus, 1993; Rigby &

Slee, 1991; Stephenson & Smith, 1989). There have been strong indications of

serious short and long term implications for victims as well as bullies. According to

Olweus, and White (1987), extreme cases of bullying have resulted in children

committing suicide rather than face another day of bullying. Murder has been another

tragic outcome related to bullying behaviour as described in The Burnage Report

(1989).

Research into bullying in schools was initiated in 1973 in Norway (Besag, 1989;

Griffiths, 1994). However, the public pressure over the bullying related suicides of

three Norwegian schoolchildren in 1982, forced the Norwegian government to take

action. Led by Olweus (1994b), a nationwide survey on bullying activities in 1983

found approximately 15% of schoolchildren involved in bullying activities, 9% as victims and 6% as bullies. This and several ensuing Scandinavian studies attracted international interest in countries such as England, Ireland, the United States of America, Japan and Australia. Interpretations of research findings from these countries have indicated a similar and sometimes higher prevalence of bullying activities in schools than the Scandinavian studies (Boulton & Underwood 1992; Callaghan & Joseph, 1995; Hoover, Oliver, & Hazler, 1992; Perry, Kusel & Perry, 1988; Rigby & Slee, 1991; Whitney & Smith, 1993).

Comparison of findings between countries, however, should be treated cautiously. Dynamics such as, cultural beliefs and values, different methodologies or inconsistencies in terminology need to be taken into consideration. Indeed, interpretations of studies have shown that the use of the same questionnaire can produce significant inconsistencies in result findings (Smith, 1991). According to Siann, Callaghan, Glissov, Lockhart & Rawson (1994), these inconsistencies have been found to often occur even between schools in similar cultural and socioeconomic areas, due to the subjective nature of social interactions. Factors identified by Siann et al that have been found to influence responses include, (i) who was conducting the questionnaire, (ii) how it was conducted, and (iii) individual perceptions of what constituted bullying behaviour. However, a positive general outcome of much of the research, regardless of methodology, was that most schoolchildren held a strong sense of justice and did not support bullying behaviour (Besag, 1989).

The hidden issue of bullying has been addressed in many innovative schools in the last decade. Intervention strategies based on empirical research findings have

produced encouraging results, with bullying reduced by 50% in some schools (Olweus, 1993). The findings of these programmes have inferred there is a strong need for schools to: (i) explicitly declare in a policy statement the unacceptability of bullying; (ii) dispel myths and promote facts about bullying; (iii) enlist parental involvement; (iv) collect information of the dynamics of bullying in their particular school; (v) use this information to develop and implement intervention strategies and conduct codes appropriate to the school's needs; and, (vi) address strategies for attitude and behaviour change at all levels encompassing family, school and community participation (Batsche & Knoff, 1994; Boulton & Underwood, 1992; Herbert, 1989; Tattum, 1993).

In 1989, the United Nations instigated The Convention on the Rights of the Child which highlighted the right of children to protection from abuse and neglect. As reported in Rayner (1994), Article 19 of the Convention stated:

all appropriate legislative, administrative, social and educational

measures to protect the child from all forms of physical or mental

violence, injury or abuse, neglect or negligent treatment...

while in the care of parents, legal guardians or any other person

who has the care of the child (p. 3).

Rayner's report included the emphasis for all children to have the right to feel safe and supported by responsible adult care, has been ratified by 129 countries. Yet, many children at school have suffered peer abuse, often maintained by prevailing adult attitudes. As stated emphatically by Olweus (1994a p. 1183) "...it is a fundamental democratic right for a child to feel safe in school and to be spared the oppression and repeated, intentional humiliation implied in bullying." Children

should have the right to be confident that their complaints about bullying will be acted on in an appropriate manner with positive outcomes.

What is Bullying?

The broadness of the concept of bullying has proven a definitional problem due to the different perceptions of what exactly entailed a bullying act. Definitions which endeavoured to include all aspects of bullying tended to be awkward and unwieldy (Besag, 1989). Bullying has been found to be a sub-type of aggressive behaviour (Olweus, 1993; Slee & Rigby, 1994). Aggression has lacked a consensual definition amongst social scientists, primarily due to the different attributions and values of the individual observer. As with many interpersonal interactions, there is an element of subjectivity in labelling what actually constitutes a particular behaviour. Bullying behaviour has encountered similar definitional problems about which acts have been construed as harmful. Blackburn (1993) asserted this would depend on personal perceptions, values, and social context. Most psychologists, according to Blackburn, have agreed that the *deliberate intent* to inflict injury or harm upon another, encompassed both aggression and bullying.

Bullying has been found to occur when a person was subjected continuously to intentional or implied negative actions of one or more other people. It has also been found to regularly involve unprovoked verbal, physical, and more recently, sexual harassment of often a weaker child by a stronger one. In the extreme, such harassment can lead to the eventual death of the bullied child (House of Representatives Standing Committee on Employment, Education, & Training, 1994; Lane, 1989; Olweus, 1993; Yaffe, 1995). Batsche and Knoff (1994) suggested

bullying encompasses "any conditions or acts that create a climate in which individual students ... feel fear or intimidation" (p. 165). Thus, the victim defines the situation as threatening or not. Yaffe asserted unwelcome sexual attention constituted harassment, whether it be as blatant as direct physical contact, or as subtle as a certain 'look'. Yaffe found many students reported the absence of adult support was one of the most demeaning aspects of the abuse. Verbal harassment has included negative actions such as, teasing or insults, while physical harassment has included, hitting, kicking or pushing (Perry et al., 1988).

According to Besag (1989), bullying involved an imbalance of physical, verbal, social and/or psychological strength. The power wielded by the perpetrator and the powerlessness of the victim was strongly evident in the bully/victim relationship as Besag's definition effectively demonstrated. Not only did the victim experience distress at the time of the attack, but also distress was prolonged and heightened by the threat of future attacks. The inclusion of repetitive attacks is an important facet in defining bullying, as it stresses the fear and anxiety experienced by victimised students (Siann, Callaghan, Lockhart, & Rawson, 1993). According to Tattum (1989), "bullying is the most malicious and malevolent form of deviant behaviour widely practiced in our schools and yet it has received only scant attention" (p. 7).

The distinction should be made however, that bullying does not include the occasional fight or quarrel between two people of the same strength (House of Representatives Standing Committee on Employment, Education, & Training, 1994; Olweus, 1994b). Clearly, bullying is based on unequal peer power relationships.

Measures of Bullying Behaviour

Several methods have been used to assess bully/victim problems. These included: (i) individual interviews, (ii) direct observation, (iii) anonymous questionnaires, and (iv) peer and teacher nominations. Siann et al. (1994) found that interviewed children tended to be guarded and defensive as they were very aware of possible negative consequences if identified. Although direct observation has seemed the most practicable way of assessing bullying activities, the dynamics of what was *really* happening is difficult to record and often left to conjecture. Two possible explanations were proposed by Perry et al. (1988). First, the presence of adults was likely to inhibit anti-social behaviour, and second, teachers may also be inclined not to report bullying as this may have indicated they were not providing adequate supervision.

Typical measures of bullying behaviour have been the use of anonymous questionnaires, supplemented by peer and teacher nominations (Olweus, 1993; Siann et al, 1994; Smith, 1991). A plausible explanation would be that a child was likely to have felt more comfortable with the security of anonymity, know- ; his or her identity was safe. Furthermore, it would seem anonymity plays an integral role in obtaining reliable responses. Whitney & Smith (1993) reported the use of anonymous questionnaires were found to enhance reliability as a general consistency in responses was demonstrated. Depending on the research, these questionnaires have included items such as: (i) what perceptions the child has of bullying, (ii) whether they had been involved in bullying activities either as a victim, a perpetrator, or both, (iii) what happened in the situation, and (iv) the duration of the bullying activity.

Many questionnaires, however, have unknown validities. For example, as reported in Rivers and Smith (1994), Olweus' measure of indirect forms of bullying in his 1991 and 1993 studies were not clearly defined. Olweus used the measure "being along [sic] at breaktime" (p. 360) to constitute the likelihood of a child being subjected to indirect forms of bullying. Rivers and Smith asserted this measure could encompass not only indirect bullying, but also direct-physical and/or direct verbal aggression, or merely the child's choice to spend time on his or her own.

Interpretations of results has shown teacher nominations corresponded well with questionnaire responses. Peer nominations, however, showed higher correlation and consistency with questionnaire responses than teacher responses (Whitney & Smith, 1993). One likely explanation would be that as children have more direct contact with each other, they would logically be exposed more often to many forms of behaviour, unobserved or unnoticed by adults. However, as reported by Titman (1989), children's and adult's perceptions and reactions to different behaviours were likely to be different. Many adults have forgotten or lost the memories of childhood, thus the context of a situation may be viewed quite differently by an adult than by a child. For example, what could be considered part of 'harmless play' or 'part of growing up' by an adult, may be perceived negatively or be frightening for a child. Furthermore, Titman asserted children were likely to be more attuned to the subtleties of their peers' behaviour than adults and feel threatened or intimidated by seemingly 'innocuous' acts.

Prevalence of Bullying

As reported earlier, Olweus' nationwide Norwegian survey in 1983 found approximately 15% of schoolchildren were involved in bullying activities, either as victims (9%) or bullies (6%) (Olweus, 1994b). These results inferred one in seven students were participants in bullying behaviour in one form or another. Data from England, Ireland, the United States of America, Japan and Australia reflected similar results and sometimes even higher prevalence rates. A general lack of uniformity in the criteria used for research into bullying, makes cross-cultural comparisons based on these data difficult to interpret. As asserted by Hoover et al. (1992) "...violence in a society may be related to the prevalence of all forms of peer victimisation, including bullying. This becomes an issue when comparing both bullying behaviors and prevalence across cultures and national boundaries" (pp 6-7). The data has indicated, however, bullying activities are unacceptably high in all countries.

A brief description of international studies exemplifies this issue. Boulton and Underwood (1992), and Whitney and Smith's (1993) English studies found 35% or more students were involved in bullying activities, with numbers of victims (20%) exceeding numbers of bullies (17%). O'Moore and Hillery (1989) found an overwhelming 51% of Irish children 'occasionally' involved in bullying activities, 31% as victims and 20% as bullies. Similarly, White's (1987) study indicated 40% of Japanese schoolchildren were involved in bullying activities, though a breakdown of figures was unavailable. However, a lack of consistency was found when compared with Crystal's (1994) report which cited only .2% of Japanese schoolchildren were reported as victims of bullying. Perry et al. (1988) and Oliver, Hoover and Hazler (1994) reported approximately 12% of American schoolchildren suffered 'severe'

forms of bullying. Rigby and Slee's (1991) Australian study found similar results to Olweus, with approximately 10% of students identified as victims and 5% as bullies. The previous italicised words, and also the discrepant Japanese figures are likely to be attributable to methodological differences, and thus, highlight and confirm the need for caution when looking at comparisons across countries.

Oliver et al. (1994) and Whitney and Smith (1993) proposed countries with lower incidence rates of bullying may be more culturally homogenous, with fewer socio economic inequalities, smaller cities and a smaller percentage of ethnic minorities, such as Norway and Australia. Supporting this rationale, studies conducted in these two countries reported little or no variation in bullying prevalence between urban and rural schools (Besag, 1989; House of Representatives Standing Committee on Employment, Education, & Training, 1994). In contrast, Stephenson and Smith's 1988 study (cited in Besag), found higher bullying incidence rates in urban than rural schools. Whilst this may be a reflection of cultural dynamics between countries, the House of Representatives Standing Committee on Employment, Education and Training reported large discrepancies of bullying prevalence between schools. For example, percentages of students reporting incidence of bullying in some Australian schools was as low as 4%. In contrast, other [Australian] schools reported up to 40% of their students were subjected to bullying behaviour. It was inferred the crucial element was the extent (or lack of) positive and consistent school staff involvement with it's students. Much of the research on bullying has been conducted in urban centres, suggesting a significant proportion of the population in question has not been included. Future research is long overdue in Australian rural centres where there has been little systematic study.

Given the differences in culture, beliefs and values, different methodologies, definitions and terms used, it is clear it has been very difficult to generalise across countries. Comparisons needed to be treated very cautiously, taking into account questions such as: (i) the socio-dynamics of the society, (ii) what types of areas the studies were conducted in (eg urban, disadvantaged), and (iii) how and what was actually being measured (eg severity of bullying). However, as Siann et al (1994) pointed out, similar generalisation difficulties have been experienced within countries as those encountered by attempts to generalise across countries.

Bullying prevalence rates across different studies have been found to vary not only within countries but even across culturally-similar schools. Besag (1989) explained:

...the quality of supervision, ideally conscientious and friendly, which can often discriminate between those schools which experience a high level of difficult behaviour such as bullying and disruption, and those schools in the same locality which do not. If the staff work amicably together as a team and all take responsibility for all pupils all of the time... a stable and controlled atmosphere conducive to fruitful work and leisure pursuits and positive social development may be achieved (p. 115).

Inconsistencies of school ethos and the use of bullying terms and definitions were found to be primary consideration factors. Furthermore, the responses of children in unequal social interactions were likely to differ given the subjective nature of perceiving what *exactly* entailed a bullying act. What one child viewed as 'mucking around' or just having a bit of fun, was distressful to the recipient. One clear similarity, however, that exists across students and countries is that a significant number of students have experienced or will experience some form of bullying

(Batsche & Knoff, 1994). Surely, school systems cannot be so institutionalised where the primary concern lies in academic achievement to the detriment of children's healthy social development.

Characteristics of Bullies and Victims

The common perception of the relationship between 'the bully' and 'the victim' is one of cowardly brute strength imposed upon a weak and 'different' individual (Stephenson & Smith, 1989). Whilst this perception can be valid, it is greatly over-simplified. Many children not labelled as a stereotypical bully, have been reported as 'sometimes' engaging in bullying behaviour (Rigby, 1993). The relationship between victimisation and aggression can be bi-polar. For example, some of the more extreme victims can also be one of the most aggressive children (Perry et al., 1988; Slee, 1995b). Interpretations of research findings have found there are sub-groups of children who are identified as bullies, victims, or as both bullies and victims. Besag (1989), Olweus (1993), Smith (1991), and Stephenson and Smith reported five main types: (i) bullies, (ii) anxious bullies, (iii) passive victims, (iv) provocative victims, and (v) bully/victims.

(i) Bullies

Typical bullies have been found to be almost always physically strong and aggressive not only toward their peers, but also toward their teachers, parents and siblings (Olweus, 1994b). Bowers, Smith and Binney (1994) reported bullies were likely to not have a father at home and were concerned with power stakes within the family, particularly with siblings. They were inclined to be easily provoked, impulsive, and held positive attitudes toward violence.

These characteristics were found to be particularly pertinent to boys. Bullies demonstrated strong tendencies to dominate others and showed little empathy toward victims of bullying. Control has been found to be a key component of bullying behaviour (Batsche & Knoff, 1994). Even so, bullies tended to be relatively popular children due to their confidence, assertiveness, wittiness and good communication skills (Olweus, 1993, Smith, 1991, Stephenson & Smith, 1989). Besag (1989) asserted that these positive characteristics projected by many bullies gave them status amongst their peers. The image of being tough, strong, confident, dominant and powerful, could be misperceived by peers as leadership qualities.

Earlier Scandinavian studies by Bjorkquist, Ekman and Laegerspetz in 1982, Lowenstein in 1978, and Olweus in 1978 found a link between bullying and psychoticism (cited in Slee & Rigby, 1993). Well-known for their scientific robustness, the Junior Eysenck Personality Inventory and the Coopersmith Self Esteem Inventory were used by Slee and Rigby to test these earlier studies. They also found an association between bullying and psychoticism. Psychoticism has been found to reflect characteristics of sensation-seeking, unempathetic and cold attitudes, and positive attitudes toward violence. By dominating weaker children, bullies maintained a sense of power. Interpretation of results from these self-esteem scales found bullies did not hold negative feelings about themselves as the results of 'normal' children and bullies could not be differentiated.

(ii) Anxious bullies

Anxious bullies' characteristics paralleled those of the 'traditional' bully (Stephenson & Smith, 1989). They were found to be generally insecure, unpopular children who tended to have negative school and home relations. They also were

likely to achieve poor school results, and lacked concentration and confidence. By

behaving in an aggressive manner, anxious bullies attempted to compensate for their

deficiencies in social and academic skills. They were found to be mainly boys and

made up only a small proportion of bullies. (Bierman, Smoot & Aumiller, 1993).

(iii) Passive Victims

Victims were likely to belong to a cohesive family unit, with high positive

involvement with parents and siblings (Bowers et al. 1994; Rigby & Slee, 1992).

Research findings have shown passive victims, particularly boys, were almost always

characterised as being physically weak (Olweus, 1993). They were the more common

type of victim who lacked confidence and suffered from low self-esteem (Slee &

Rigby, 1994). They were unpopular amongst their peers and often did not have even

one good friend. Consequently, these children did not enjoy quality peer

relationships, which often resulted in them being isolated from the mainstream peer

group (Slee, 1995a). Passive victims also tended to be anxious, insecure, and timid,

and were likely to cry when intimidated by another person (Olweus, 1993). They

often perceived themselves as worthless and deserving of ill-treatment. Furthermore,

their vulnerable disposition was found to attract the negative actions of others, who

were likely to perceive they could obtain tangible rewards from these students in a

non-threatening encounter (Perry et al., 1988). Besag (1989) found that victims' poor

communication skills limited their chances of walking away from trouble, and

inhibited them from reporting bullying incidents. Victims' self-perceptions of

characteristics that attracted bullying included: (i) I didn't fit in; (ii) being physically

weak; (iii) clothes I wore; (iv) facial appearance; (v) being emotional/crying; (vi)

being overweight; and (vii) who my friends were (Hoover et al. 1992). It is an

unsettling prospect when these responses imply the 'right image' as an important influence in peer acceptance and affiliation.

Slee and Rigby (1993) found a relationship between low self-esteem and introversion was evident in passive victims. To minimise the risk of a direct confrontation, victims tended to avoid social interactions. By trying not to attract attention to themselves, these children became isolated from the mainstream school population. However, Slee and Rigby reported an unfortunate but common outcome of this 'coping strategy', has been found to often lead to the opposite effect. The relative isolation many victimised children seek, may actually increase their chances of being labelled 'different', thereby making them likely candidates for victimisation.

(iv) Provocative victims

Provocative victims were a minority of children who have been found to be overly active, strong, and easily provoked (Olweus, 1993). They were likely to be distracted easily, have low concentration skills, and tended to be academically deficient (Bierman et al 1993). Provocative victims were immature, attention seeking children who often complained to teachers about being victimised. These complaints were often difficult to address as the teacher needed to establish whether the victim provoked the negative actions of another child or children. According to Stephenson and Smith (1989), peers were found to justify bullying such children as the provocative victim's irritating behaviour 'asked for it.' Not surprisingly, the provocative victim has been found to be unpopular with peers.

(v) Bully/victims

Like bullies, bully/victims were likely not to have a father at home ((Bowers et al., 1994). These children often experienced inconsistent parental discipline and

monitoring practices, coupled with lack of parental affection (usually with the

mother) (Perry et al., 1988). Bully/victims have been found to be the most unpopular

children amongst their peers. Like provocative victims, they were easily provoked

but also provoked others. Although tending to be physically strong and assertive,

they are bullied by more dominant peers. They retaliated by bullying others weaker

than themselves, and also complained frequently about being victimised (Stephenson

& Smith, 1989; Smith 1991). Bowers et al. suggested bully/victims may be the most

'at risk' of the sub-groups to suffer the negative consequences of the bullying

experience as both a victim and a bully.

What Factors Contribute to Bullying Behaviour?

The existing literature has suggested childhood aggression is often a product of a

number of interacting factors such as, genetic, perinatal, physiological, familial, and

learning (Huesmann & Miller, 1994). Though further investigation is warranted,

Huesmann and Miller suggested severe anti-social aggressive behaviour is most

likely to occur when some of these implicating factors converge. While not

dismissing the importance of some of these factors, this report focuses on the

powerful influence of socialisation processes. Smith (1991) summarised the more

important socialisation factors likely to contribute to involvement in bullying

behaviour in four categories: (i) the child, (ii) the family, (iii) the school, and (iv)

neighbourhood factors or general society.

Child

Interpretations of research findings have shown the temperament of a child to be

a generally reliable indicator in assessing whether a child is likely to participate in

bullying behaviour (Olweus, 1994a). Quick-tempered, active, and impulsive children

have been found to display more bullying tendencies than withdrawn, unassertive

children (Smith, 1991). Currently the cognitive and social skills of a child have

been the area most investigated. A social competence model based on how children

process information has been proposed by Dodge, Pettit, McClaskey and Brown's

1986 study (cited in Smith, 1991). This model focused on how children encoded,

interpreted, evaluated, and responded to a stimulus situation. Aggressive children

were likely to perceive more situations as hostile and tended to respond with adverse

behaviour, while victimised children tended to withdraw from peer interactions.

Conversely, some children may simply have different values and goals, rather

than an information-processing deficiency in social skills. Drawn from social

learning theory, social cognitive theorists have proposed that the anticipated positive

consequences of aggressive behaviour might serve as incentives for behaviour. For

example, Guerra, Nucci and Huesmann (1994) found these positive consequences

often included (i) tangible rewards (desired objects), (ii) psychological benefits

(dominance over others), (iii) self-evaluations (increased self worth), and (iv) social

reactions (status among peers). An alternative but similar theory proposed by Ajzen

and Fishbein (1980), is the theory of reasoned action that suggested a behaviour is

more likely to be performed when the individual evaluated it positively. Furthermore,

the behaviour was reinforced when significant others showed approval and

acceptance of the behaviour. Thus, children were more likely to engage in bullying

behaviour when the consequences were perceived as positive. Such behaviours are

suggested to be learnt from significantly important models to the child, primarily

parents, peers, teachers, and television characters (Bandura, 1986).

There has been some disparity in research findings as to whether or not physical characteristics could be considered a salient 'victim variable'. Distinguishing features such as, obesity, frailness, a disability, and hair or skin colour were not found to be significant factors by Olweus (1994a) or Roland (1989). According to Roland, physical characteristics cannot be discounted as a reason for being bullied, although they were somewhat overestimated. He asserted that students who were not bullied also shared similar physical irregularities of victims. In contrast, the authors of The Burnage Report (1989), and Stephenson and Smith (1989) reported correlations between bullying and physical differences to the cultural majority. Teachers reported victims deviation from the norm (eg. in appearance, ability, ethnicity etc.) largely contributed to some students being negatively targeted by other children (Siann et al., 1993). The differences in these Norwegian and English research findings may be attributed to cultural dynamics and/or different methodologies used

It would appear however, a child who was considered 'different' to the norm, would be more likely to attract attention than a 'normal' child. How a different child reacts to negative action against him or herself is critical to the situation, as it is likely to affect whether the bully or bullies persist in making this child a target for future peer abuse. This is an important area for further research to develop coping strategies for such children. In the present climate of equity for all, surely the respective authorities should recognise being fat, weak, or ethnically different are no excuses for victimisation. The situation becomes more complex when dealing with 'special' groups, such as, children with learning difficulties (LD) in mainstream schools. Many special needs children reported rarely being socially included within

the larger peer group, and being bullied more than mainstream students (Martlew & Hodson, 1991).

(ii) Family factors

Parents, as the primary sources of information in the first few years of a child's life, play a critical role in the social development of their children. Interpretations of research findings have found antisocial behaviour was learned, strengthened and maintained by the constant exposure to aggressive social interaction in the home (Chazan, 1989; Olweus, 1994a; Reid & Patterson, 1989). Parental conflict and disharmony, cold, harsh and domineering parental attitudes, and inconsistent discipline characterised the general home dynamics of bullies (Oliver et al., 1994; Rigby, 1994). From an early age these children modelled their own behaviour upon irritable, ineffective, and often violent parenting. By the time these children started school, the early basic training in aggression had developed into an antisocial behaviour pattern. According to Reid and Patterson, this pattern has often been found to generalise to the classroom and playground.

This view is consistent with results of a study comparing schoolchildren's perceptions of their families and peer relations (Rigby, 1993). Poorer psycho-social health of families was found to be positively correlated with children's bullying behaviour. In contrast, congenial family relations was associated with positive peer social interactions. Indeed, Mathias, Mertin and Murray (1995) found approximately 57% of children exposed to domestic violence exhibited borderline-to-severe behavioural problems, including deficiencies in problem solving skills. When matched with a control sample, the 'domestic violence group' showed significant

differences in behaviour and social adaptability, and were more likely to choose aggressive responses than the control sample.

Bullying behaviour can have serious future consequences. Interpretations of research evidence has strongly indicated antisocial behaviour was a consistent pattern which often began in early childhood and persisted at least through early adult life. Quantitative analysis of longitudinal studies of antisocial behaviour reported by Loeber and Dishion in 1983 (cited in Reid & Patterson, 1989) and other researchers (Dubow & Reid, 1994; House of Representatives Standing Committee on Employment, Education, & Training, 1994; Farrington, 1994; McCord, 1994; Olweus, 1993), found that the *most consistent* and *powerful predictors* of later delinquency and criminal behaviour were parenting variables.

(iii) Schools

> When a condition exists in which students fear for their safety (or their lives) and feel that they have little or no peer and/or teacher support, it is not surprising that an increase in...both self-directed and interpersonal aggression is seen in the school setting (Batsche & Knoff, 1994, p. 169).

Children spend a large proportion of their time in school, and are expected to perform efficiently both academically and socially (Sharp & Thompson, 1992). 'School ethos' has been largely implicated as an important factor in social behaviour in which tough-minded, insensitive attitudes toward others were reinforced (Keise, 1992; Smith, 1991). There have been strong suggestions that many schools uphold stereotypical male rules and norms which reflected society's desirability to be "very dominant, always hiding emotions, very objective, very independent, very competitive, never crying, very ambitious, and very aggressive" (Askew, 1989, p.

62). "With children's increased exposure to such normative pressure, unsympathetic attitudes toward victims of bullying would be expected to become increasingly common among children as they become older" (Rigby & Slee, 1991, p. 616). Furthermore, these attitudes were maintained by prevalent adult attitudes toward bullying such as, (i) 'some bullying is good for character building' (makes the man), (ii) 'bullying has always happened and is part of growing up', and (iii) 'kids get over it' (Griffiths, 1995; Rigby & Slee, 1992).

Research themes intonate bullying is embedded in school systems, strongly suggesting a reflection of a patriarchal society that maintains the status quo. Further investigations in this area is essential to challenge these inappropriate attitudes.

(iv) Wider society

Past research evidence has inferred that bullying is a social construct and generally accepted as part of the culture (Askew, 1989; Keise, 1992; Rigby & Slee, 1992; Whitney & Smith, 1993). There have been disparities in studies that investigated the socio-metrics of a community such as, social class and socioeconomic differences in relation to bullying behaviour. Olweus' (1994a) Norwegian studies did not find a relation between socio-dynamics and bullying. Yet, Stephenson and Smith (1989) and Whitney and Smith's English studies found correlations between socially disadvantaged minors and bullying. These differences may have reflected the differences in societal attitudes to violence as Scandinavian countries have legislated against physical punishment of children, including infliction by parents (Smith, 1991). Furthermore, social class differentiation may not be as pronounced in Scandinavia as it is in England. However, lower socio-economic status (SES) groups were likely to be more identifiable and easier to investigate than

higher SES groups in England. Thus, these results may not be a true representation of the correlation between bullying and socio-metric dynamics, and further exemplifies the need for future investigation.

Consequences of Bullying

Serious short and long-term consequences have been found to occur for victims as well as bullies. Many victims were likely to spend most time alone at school as they lacked close friends, confidence, and were often rejected by peers (Siann et al., 1993). Victims were more likely to be anxious, lonely children who suffered from low self-esteem due primarily to social isolation combined with lack of support (Olweus, 1993; 1994b). A little researched anxiety disorder, social evaluative anxiety, has been associated with peer status in primary schoolchildren (Slee, 1994). Some symptoms reported are, discomfort, distress, fear, and anxiety in social situations, including the dread of receiving negative peer appraisals. Their general health suffered and they tended to be more sickly, depressed and withdrawn than other children (Rigby, 1995; Slee, 1995b). Clearly, having friends is an important protective factor against bullying. While it is known there are certain children who are continually victimised, little is known about the qualities of these children that subject them to prolonged peer attacks. Further research is required to investigate what qualities or characteristics victimised children possess (or do not possess), which results in them being shunned by their peers. Gilmartin's 1987 study (cited in Siann et al., 1993) found that peer rejection as a child was a strong predictor of later adult dysfunctional relationships. Gilmartin found detailed life history interviews

showed 80% of 'love-shy' men, who had been rejected by peers as children, had difficulties in maintaining permanent relationships.

Bullies were reported to be aggressive, impulsive individuals who held positive attitudes toward violence (Olweus, 1993). They were likely to be unpopular children, rejected by most of their peers. The aggressive temperaments of many bullies were maintained and reinforced largely by a dysfunctional family life (Reid & Patterson, 1989). Research findings have shown harsh, inconsistent parental discipline contributed to a child's hostile, unempathetic attitudes toward others (Chazan, 1989; Olweus, 1994a; Oliver et al., 1994; Rigby, 1994). Interestingly, Slee (1995b) found an association between bullying tendencies and depression. Loeber and Dishion's 1983 study (cited in Reid & Patterson, 1989) found parenting variables were the most consistent predictors of later criminal behaviour. Longitudinal studies have shown that child bullies are four times more likely to have criminal records when adults than other children (Olweus). Bullies have been reported to maintain the bullying cycle as adults by abusing their partners and children (Oliver et al.). Furthermore, in the inter-generational transmission of aggression, violent offenders were likely to have children who were bullies (Farrington, 1993). Cases of murder and suicide have been the extreme and tragic consequences of bullying-related behaviour (The Burnage Report, 1989; White, 1987).

Gender and Age Differences

Human behaviour has been largely regulated and formed by cultural factors such as those in Hinde's 1988 study which reported that the norms, values and institutions of society far outweighed biological influences (cited in Besag, 1989). Traditionally,

males have been found to be more aggressive than females, with existing social norms dictating physical aggression as an 'acceptable' male characteristic, whilst not desirable for females (Lagerspetz & Bjorkqvist, 1994). A longitudinal study examining aggression from infancy to 8 years of age found no significant gender differences in baby and toddlerhood (Sanson, Prior, Smart, & Oberklaid, 1993). Yet, as these children grew older, boys were found to exhibit more 'difficult' behaviour than girls, by being more uncooperative, non-compliant, aggressive, and hyperactive. Their language, motor and social skills were also found to be not as developed as girls. In support of social learning theory, Sanson et al. suggested these results infer the influence of many environmental factors which can contribute greatly to the development of aggressive behaviour. In Australia, for example, being 'macho' equates to the acceptable and desirable portrayal of maleness. Environmental influences that reinforce this image include, aggressive physical contact sports, certain toys, and children's television programmes.

Based on the modelling process, asserted television exposed children to many opportunities in which they were able to observe the self-evaluative standards of others (Bandura, 1986; Huesmann, 1986). According to Josephson (1987), violent characters on television are almost always male. Furthermore, the aggressive actions of heroic television characters go unpunished, as these characters are portrayed as successful, moral and brave, thus, their actions are justified. It is clear society in general, 'tolerates' and reinforces aggressive behaviour in boys more so than girls.

These social norms reflected much of the bullying research which has focused on the more direct forms of bullying including, hitting, kicking, and pushing. Interpretations of past research findings have shown that boys were more prominent

than girls in physical bullying activities as both victims and bullies (Besag, 1989; Boulton & Underwood, 1992; Olweus, 1994a; Smith, 1991; Whitney & Smith, 1993). This seemed likely to be a reflection of definitions, however, not always addressing the more subtle forms of bullying, perhaps more pertinent to girls, such as the deliberate exclusion of a peer. The lack of attention to gender differences in the expression of aggression has been a limitation of the present research in this area. It is possible females may display aggression in forms that have been neglected in past research. There are important implications for future investigations in this area, perhaps leading to the implementation of more appropriate strategies.

Boys have been found to assert their status by instrumental means and physical dominance (Block, 1983). They also socialised with a wide network of cohorts. In contrast, girls are more likely to have a small tight-knit group of friends, implying the preference of close, intimate relationships (Rivers & Smith, 1994). When motivated to hurt a peer, Crick and Grotpeter (1995) proposed children act in ways that would negatively impact on the valued goals of their same-gender peers. Focusing on gender differences between overt (physical and verbal) and subtle forms of aggression, Crick and Grotpeter found boys more likely to use overt means to hurt a peer. Girls were more likely to use relational aggression to demoralise a peer's social standing by deliberate ostracism of the social group or rumour mongering. Interestingly, the frequency of aggressive behaviour was approximately equal for both boys (27%) and girls (21.7%) when both physical and relational aggression were examined. This study has important implications for future intervention strategies. First, it supported past research findings of boys being more physically aggressive toward their peers. Second, it also provided empirical evidence of girls

subtle forms of aggression, which has generally been overlooked in previous research on aggressive behaviour. Gender differences may be a valuable inclusion in the effectiveness of future bullying programmes, on the terms of the cost/benefit ratio of different types of behaviour for the students involved.

Some studies have addressed gender differences in bullying behaviour. Interpretations of measures of indirect forms of bullying such as intentional exclusion, have found significant increases in girls' bullying involvement. Boys, however, were also found to be more exposed to *indirect* forms of bullying than *direct* bullying, with similar percentages to girls (Olweus, 1994a). Rigby (1995) found being called hurtful names and being teased were reported as the more common forms of indirect bullying for both genders with approximately the same prevalence of eleven percent. In contrast, 'ridicule and teasing' were found to be significantly higher with American girls than boys (Hoover et al., 1992). Being left out of things on purpose, however, showed over nine percent involvement for girls, and under six percent for boys (Rigby). Research findings have generally indicated that teasing was the main form of bullying for both boys and girls. A correlation was found between being a victim of physical bullying and of indirect bullying (Olweus; Rigby).

Olweus' (1994a), and Rigby's (1994) studies reported marked increases in physical bullying behaviour during middle primary and lower secondary years. These findings were supported by Hoover et al. (1992) who reported American children felt most at risk of peer victimisation between the ages of 10 and 14 years. This trend tended to decline as age and year levels increased. Verbal abuse however, was found to remain constant throughout the school years.

Younger children reported being bullied more than older children (Rigby & Slee, 1991). Being generally smaller, weaker, and more vulnerable than older, stronger students, these younger children would more likely be at greater risk of peer abuse. Juvenile boys, in particular, voiced more complaints than girls of being victimised. One possible explanation was that older students, especially boys, perceived not seeking adult help as a symbol of their growing independence (Griffiths, 1995). Another plausible explanation was that juvenile children were likely to be less inhibited to complain than older ones, and younger boys gained more attention as they tended to be more 'visible' by their overt physical behaviour than girls.

Younger children, in particular, have been found to show more assertion in rejecting hostile or negative intentions toward themselves or others than older children. According to Kalliopuska (1992), children's "...self-reports of empathy have been positively associated with age in the pre-school and elementary school years...findings are inconsistent for older children and adolescents...the attribution of responsibility and helping behaviour are associated with each other" (pp. 747, 748). Several speculations can be made, one being, that younger children feel more responsible for the welfare of others, and/or feel more empathic or supportive of others in distress. Perhaps being a 'high risk' bullying group, many young children are able to experience another person's feelings as they have suffered similarly. Another speculation is that students in junior primary school have perhaps not been as exposed or enculturated to conform to general school norms in which tough-minded, insensitive attitudes toward others was reinforced (Askew, 1989; Keise, 1992; Smith, 1991). There has been little research on the dynamics of social processing of children's helping behaviour toward peers. This study focused on the

seemingly more positive overt helping behaviours displayed by younger children. It was anticipated valuable information for the development of future effective intervention programmes would be achieved.

Rigby (1994) found an increase in reported bullying incidents in the first two years of high school when compared with the last year of primary school. As 'small fish in a big pond', these younger students appear to be 'fair game' for older aggressive peers. The transition from primary to secondary school has been documented in Davis' 1986 study which reported the most common concern for students entering high school was the fear of bullying (cited in Tattum, 1989). According to West and Varlaam (1991), over half (51%) of the students in their study, reported the fear of bullying, gangs or violence was a primary concern in influencing choice of high school. Future investigation toward the dynamics of shifting from Year seven to Year eight would be valuable to examine patterns or trends in children's transition from primary to secondary school.

Past research findings have shown that boys reported mainly being bullied by other boys, while girls are bullied by both boys and girls (Besag, 1989; Roland, 1989). Olweus' Bergen study (1994a) found more than 60% of middle primary bullied girls were bullied by boys, 15-20% were bullied by both boys and girls, while 80% of boys were bullied by boys. Roland has suggested that girls may not be as 'truthful' about their participation in aggressive situations. Besag's subtle approach suggested that girls interpreted situations differently, being either unaware of (or not admitting to) being a victim of exclusion, or a perpetrator of the same event. Siann et al. (1993) found boys more likely than girls to admit to being involved in direct and indirect bullying activities. However, teachers and parents perceived girls were

equally involved in bullying, though to a lesser degree at the physical level. This perhaps reflected definitions of what *exactly* entailed a bullying act which has previously focused on physical bullying.

Roland (1989) found that male bullies and victims generally achieved below-average academic grades. These children were found to be over-represented in remedial classes (Hoover & Hazler, 1991). These findings were also reported for female victims but not for girl bullies who tended to achieve better grades and 'seemed' to be more intelligent.

Children with learning difficulties (LD), a small but significant group, have been found to experience more bullying than mainstream children (Martlew & Hodson, 1991; O'Moore & Hillery, 1989; Thompson, Whitney, & Smith, 1994). Research evidence has shown mainstream students generally held negative attitudes toward their peers with LD. They tended not to include them and to socialise almost exclusively with other mainstream children. Conversely, students with LD, particularly older children, reported being bullied more than their mainstream counterparts, and had fewer friends. Whether physically or intellectually challenged, these children were likely to feel anxious by their lack of social ability, resulting in their general withdrawal from social interactions. Whilst not denying the benefits of integrating children with LD into mainstream schools, further research is needed for developing effective and positive programmes for mainstream and LD children alike.

Hoffman, and Frodi, Macauley and Thorne's 1977 studies reported that females were generally more empathetic than males toward others (cited in Rigby & Slee, 1991). Biological influences on aggressive behaviour are explored elsewhere (Blackburn, 1993; Lore & Schultz, 1993). Social expectations and norms were likely

to be a dominant factor in displays of empathy. These expectations could be attributed to the 'traditional' [sic] female social roles of caregiver and nurturer, which are deeply embedded in the socialisation process of many cultures (Lagerspetz & Bjorkqvist, 1994). Thus, research findings have found that girls hold more empathic attitudes toward victims of bullying than boys. Girls (more so than boys), also reported not justifying or admiring bullying behaviour (Boulton & Underwood, 1992; Rigby & Slee, 1991; Whitney & Smith, 1993). However, a few children, particularly boys, reported they had 'little or no empathy' for victims.

The prevailing sex role stereotype maintains empathy is more characteristic of females than males. Interestingly, this stereotype is in accordance with differing theoretical approaches such as, biologically grounded Freud, and socially structured Parsons (Hoffman, 1977). According to Hoffman, "...females have traditionally been socialised to acquire expressive traits such as, empathy, compassion...males are initially socialised expressively, but with age are increasingly encouraged to acquire instrumental traits, such as mastery and problem-solving (p. 712).

As a social construct, gender roles should be re-evaluated and accepted that not everyone is equally socialised into gender stereotypes (Bretherton, Collins, & Ferretti, 1993). As Bretherton et al. asserted, "...aggression is not triggered merely by environmental events but rather through the way in which these events are perceived and processed" (p. 106). Intervention strategies based on a social cognitive model, are likely to achieve success by focusing on developing social problem solving skills to obtain effective and positive outcomes.

Attitudes toward Bullying

Interpretations of research findings have indicated that children hold positive attitudes toward victims. Many children reported they felt empathy and showed support toward victims, and did not justify or admire bullying (Boulton & Underwood, 1992; Rigby & Slee, 1991; Whitney & Smith, 1993). Nevertheless, there were some children, particularly boys, who asserted they had no support for victims.

Boulton and Underwood (1992) found the most common response by bullies to their question, "What makes bullies pick on other children?" was that they were provoked in some way. However, interpretations of research findings have indicated only a small minority of children were provocative victims who tended to irritate most peers and were generally perceived as 'asking for it' (Stephenson & Smith, 1989). Conversely, passive victim responses to the same question were, because they were smaller, weaker and didn't fight back. Other significant responses for bullying included, social status and dominance, where some bullies admitted their involvement in bullying activities was because they were big, tough, and strong. Hence, by behaving in these ways, their dominance was displayed. Boulton and Underwood also found a lack of empathy for victims, as significantly fewer bullies thought victims would experience feelings of sadness or hurt as a result of bullying. These result findings have suggested that bullies do not see themselves (or other bullies) as perpetrators of unprovoked attacks, but perceived their behaviour as justified by the provocation of peers. Bullies were generally not concerned about negative implications toward themselves, as they tended to mix with like-minded peers who reinforced and maintained each other's behaviour.

Bandura (1986) asserted aggression is largely influenced by outcome expectancies, that is, children's perceptions of the likelihood of positive or negative consequences following aggressive behaviour; and outcome values, being the level of importance connected to a potential anti-social act. Using the social cognitive model, Perry, Willard and Perry (1990) found primary schoolchildren learn very quickly which of their peers are more likely to give up rewards when aggressively attacked. Perry et al. found these victimised children often did not retaliate, or retaliated ineffectually or inappropriately. Thus, they were more readily targeted by aggressive peers rather than their non-victimised counterparts, for the easy procuration of tangible rewards or status promotion within the peer group. Furthermore, bullies reported feelings of indifference toward the hurt or suffering they caused victims, implying desensitisation and justification of their actions. According to Perry et al. "...peer rejection has diverse behavioral determinants suggesting that the outcome expectancies and values children hold regarding a rejected peer will vary markedly according to the particular behavioural attributes of the rejected peer" (p. 1323). This study demonstrated the need to empower victims on ways to respond to attacks in ways that bullies do not find reinforcing.

Rigby and Slee (1991) conducted one of the first investigations of bullying in Australian schools, including students attitudes toward victims of bullying. Result findings showed the underlying structure of attitudes revealed three distinct factors: first, there was a tendency to reject children who are bullied because of their supposed weakness (eg. Nobody likes a wimp); second, a readiness to justify bullying to the extent where it was enjoyable to witness the spectacle of children being bullied and to support the bully (eg It's funny to see kids get upset when

they're teased); and third, a desire to support the victim (eg. I like it when someone stands up for kids who are being bullied). Interpretation of these results showed the majority of children (approximately 60%) endorsed the pro-victim response, by showing empathy and support for the victim, and not justifying or admiring bullying. Nevertheless, there were some children (approximately 8%), particularly boys, who indicated they felt little or no inclination to support victims.

A further study by Rigby and Slee (1993) found interpersonal relations between schoolchildren as reflecting three largely independent tendencies: to bully others (eg. I am part of a group that goes around teasing others); to be victimised (eg. Others make fun of me); and to relate to peers in a pro-social and co-operative manner (eg, I like making friends). These results have shown reliability with later Australian studies (Rigby, 1993; Slee, 1993; Slee, 1995a; Slee, 1995b) using the same instrument, the Peer Relations Questionnaire. studies. Consistency has also been achieved with other studies (Boulton & Underwood, 1992; Olweus, 1993; Whitney & Smith, 1993) that suggest tendencies to bully others are not uncommonly found in the same individuals.

It is unclear why some children were found to hold pro-victim attitudes while others did not. Lerner's 1980 study (cited in Rigby & Slee, 1991) reported that some children may have found comfort in the attitude of a 'just world belief'. By holding the belief, that negative actions are not inflicted on "good people", these children may have assumed "as long as you're good, no harm will come to you." Victims of bullying were perceived as having done something 'bad' and therefore, deserved the treatment they received. Shaver's 1975 study (cited in Rigby & Slee) suggested the motivation to hold the 'just world belief' has been found to be dependent on the

child's perception of the degree of threat. When intimidation was perceived as moderately great as opposed to highly likely or very improbable, the child was motivated to hold the belief and blame the victim. The fear of retaliation rather than their held attitudes was the probable contributing factor that dictated many children's behaviour. The likelihood they would be the next victim would invariably influence a child's decisions. Lane (1989) suggested less aggressive children were drawn or pressured into participating, or at least tolerating bullying. These children were clear about the possible consequences of becoming a potential victim if they did not comply.

There appears to be incongruent evidence emerging from research findings. Many children reported holding pro-victim attitudes and not supporting or justifying bullying actions. Yet, these seemingly strong attitudes do not seem to readily transfer to helping behaviours. It would appear students are not equipped to deal with bullying situations, and do not possess the confidence or opportunity to access relevant resources. One obvious option was to seek adult support, but a common response from students was adults do little to discourage bullying (Batsche & Knoff, 1994). It is suggested the key component lacking, is the active and positive involvement of adults.

What can be done about Bullying?

Once all schools accept that bullying takes place within their own school, the defensive attitude that some adopt will disappear

(Tattum & Tattum, 1994, p.3).

Johnstone, O'Malley and Bachmann's 1993 study (cited in Batsche & Knoff, 1994) reported that 16% of eighth graders felt unsafe at school 'some' or 'most of the time'. Avoidance of certain areas at school were necessary for approximately 20% of students as a precautionary measure in minimising the risk of being abused. Such evidence cannot be ignored, as it highlights school is perceived as a place to fear for many students. Children cannot be expected to develop academically and socially in an atmosphere of fear and potential threat of negative actions directed toward them.

According to Tattum (1993), many school staff have doggedly demonstrated reluctance and avoidance in tackling bullying issues. One explanation cited is because of the perceived negative connotations that may be reflected upon their schools. Tattum asserted, however, their caution was misguided as they not only ignored the problem, but were guilty of maintaining the status quo by condoning aggressive behaviour by some of their students. If schools persist in withholding protection and support, victims are not only victims of their peers, but also of the system (Batsche & Knoff, 1994). This issue was acknowledged in the House of Representatives Standing Committee on Employment, Education, and Training (1994) report, "...while students were aware of the degree of bullying in [Australian] schools, the school community typically under-estimated the extent to which it occurred" (p.13).

Effective intervention programmes were developed by initially acknowledging that bullying behaviour existed and worked towards understanding its origins and motivation. With the wealth of information and knowledge, complemented by positive media publicity, the hidden issue of bullying has been addressed in many innovative schools. Intervention strategies that have acknowledged bullying existed,

but would not be accepted have produced encouraging results, with bullying reduced by 50% in some schools (Olweus, 1993). Olweus' 1991 report (cited in Peplar, Craig, Zieglar, & Charach, 1994) found other related positive outcomes with the implementation of anti-bullying programmes. Not only did theft, vandalism, and truancy abate, but students expressed more satisfaction with school.

According to Olweus (1994b), increased public knowledge and awareness were key components in combating bullying behaviour. Involvement by students, school staff, families, and community members were paramount in confronting bullying. Additionally, the 'non-involved' children who were the majority, were provided the means and resources to try to stop or at least decrease, bullying prevalence. Research findings have strongly indicated a need to change attitudes and behaviour of most children, toward the perception of bullying as unacceptable and something that should concern them. Herbert (1989) asserted the active involvement of most children needed to be addressed. As much of the research has indicated, most children held pro-victim attitudes. The peer group's social pressure could be a more effective deterrent of bullying behaviour than sanctions imposed by adults in authority. The consistent, supportive, and positive involvement of school staff however, is crucial to the success of such programmes (Peplar et al., 1994). Children were found to be more inclined to seek help from adults when they perceived the qualities of the helpers reflected "...[a] willingness to help, their experience of similar situations to those facing the child, and their ability to make the child feel better" (Westcott & Davies, 1995, p. 267). Indeed, research findings in South Australia have found "...the incidence of bullying within a school tends to vary

inversely with the average level of support within the school for victims" (Slee & Rigby, 1994, p. 7).

Research evidence has supported the approach that intervention efforts in this domain should not be primarily focused on changing the reactions and characteristics of the victim. Attention was also needed toward the behaviour and attitudes of the social environment, particularly that of the aggressive bullies (Olweus, 1993; Smith, 1991). Blame and threat imposed upon bullies have been reported as being counter-productive. Acknowledgment of responsibility for one's own actions is one strategy used by some interventionists (Rigby, 1994). Utilisation of the 'No Blame Approach' and the Method of 'Shared Concern'(or Pikas method), has resulted in positive outcomes. These strategies do not blame the bullies, but held them accountable for their actions and responsible for reparation. According to Rigby effective use of this strategy has shown that bullies produced positive suggestions in improving the situation for the victim. Drama and language activities relating to bullying have been used successfully to promote discussion of everyday scenarios in problem solving and/or resolution (Peplar et al., 1994).

Other successful strategies proposed were 'twinning' and cooperative group work techniques (Boulton & Underwood, 1992). Twinning refers to a buddy system between younger and older students, where the older students have the responsibility to look out for their younger counterparts. Boulton and Underwood reported co-operative group work techniques have shown positive outcomes in children's ethnic attitudes in multicultural schools.

Two distinctive themes were evident from the research. First, taking the statistics globally (regardless of methodological differences), concern about the extent of bullying is justified. The number of children involved in bullying activities has been found to be unacceptably high and needs to be addressed. Children have suffered and are suffering short and long term consequences of peer abuse. Second, caution was necessary to generalising across studies (even across schools), as different social factors often affected responses. School policies would be more effective when based on the dynamics, needs, and wants of each individual school.

Pro-victim attitudes seem to be held by many children, yet there are high numbers of children bullied. The key concern should be the protection and support for these children by all caregivers. 'Positive reporting' should be promoted in schools, in direct opposition to the covert strategies used by bullies to manipulate interpersonal agendas. In addition, many of the non-involved children need to be provided resources, information, and be positively assured they can assist a bullied child, without the fear of repercussion. Intervention strategies which have been implemented by some innovative schools have achieved success rates by decreasing bullying by up to 50%. Schools need to acknowledge that bullying is a phenomena that is prevalent in all schools. Ignoring bullying or dealing with it in a superficial manner, only serves to maintain and reinforce this malicious behaviour.

Aims of the Present Study

In less than a decade, there has been a plethora of empirical research into the previously limited area of bullying in schools. Interpretation of findings from Australian studies (Griffiths, 1995; Rigby & Slee, 1993; Rigby & Slee, 1993; Rigby, 1994; Slee, 1995a; Slee, 1995b) have reflected overseas trends, adding to existing knowledge and of this pervasive behaviour. Many Australian studies however, have been conducted in urban areas. There has been little systematic research in rural areas, suggesting a large proportion of the population has been overlooked in past research. It was considered unnecessary, however, to examine prevalence of bullying in the present study, as it was accepted bullying is global and occurs in all schools.

There were three aims of this study. First, to investigate whether generalisation from an urban to a rural setting occurred, Rigby and Slee's (1991) study on students attitudes toward victims of bullying was replicated, using the Pro-victim Scale. Rigby and Slee found three distinct factors: (i) a tendency to reject children who were bullied because of their supposed weakness; (ii) a tendency to justify bullying to the extent where it was enjoyable to witness the spectacle of children being bullied, and to support the bully; and, (iii) a tendency to support the victim.

Second, the Peer Relations Questionnaire has been used in several Australian studies (Rigby & Slee, 1993; Slee, 1995a; Slee, 1995b) to investigate the dynamics of children's peer relations. Again, three factors were extracted: (i) to bully others; (ii) to be a victim; and, (iii) to act in a pro-social manner toward others. This study investigated whether these three factors generalised to a rural Australian setting.

Third, to investigate and explore students' attitudes and behaviour toward bullying, seven hypotheses were proposed.

Most schoolchildren have been found to hold positive attitudes toward victims of bullying (Boulton & Underwood, 1992; Rigby & Slee, 1991; Whitney & Smith, 1993). Many children, particularly, girls and younger primary schoolchildren, reported they felt empathic support toward victims, and did not justify or admire bullying behaviour. On this basis, the Pro-victim Scale was used to measure hypotheses concerned with attitudes toward victims. First, that schoolchildren hold supportive attitudes toward victims of bullying. Second, that girls show more supportive attitudes than boys toward victims of bullying, and third, that Year 3 schoolchildren show more supportive attitudes toward victims of bullying than Year 7, 8, and 12 students.

This study also investigated whether these supportive positive attitudes transferred to the mainstream peer group. Past research findings has shown more children relate in a pro-social manner than not, toward their peers (Rigby & Slee, 1993) Previous research has also focused on the physical aspect of bullying, showing the higher involvement of boys than girls in bullying activities. However, recent studies (Crick & Grotpeter, 1995; Rigby, 1994; Rivers & Smith, 1994) have shown girls can be more involved in bullying than previously thought, when indirect aggression against a peer is included in the bullying definition (eg. exclusion, spreading rumours). The Peer Relations Questionnaire was used to measure the following hypotheses: First, most schoolchildren act in a pro-social manner toward their peers, second, that boys show higher incidence than girls of being victims of direct bullying, and third, that girls show higher incidence than boys of being victims of indirect bullying.

There has been little systematic inquiry into children's helping behaviour toward peers in need. In contrast, much of the research has been focused on children's self-reports on attitudes, which has been strongly positive toward victims. The focus and extension of the present research was to investigate whether these self-reports transferred to overt behaviour, with non-bullied children taking some form of action to help the victim. What are children likely to do when confronted with a situation of witnessing another child being bullied? The distinction between overt and covert attitudes of children is unclear. (There is always the inherent danger of children giving socially appropriate responses to hypothetical situations). Little is known about age and/or gender differences in a child's action or inaction toward helping a victim, or the dynamics which may influence their decision to take action or not. Though research is limited at present, there is some evidence junior primary children show more positive helping behaviour than older students (Kalliopuska, 1992, Keise, 1992; Smith, 1991). Thus, using the Victim Questionnaire, the final hypothesis proposed was, that Year 3 schoolchildren show more positive forms of helping behaviour toward victims of bullying than Year 7, 8, and 12 students.

Method

Participants

Participants were acquired from five randomly selected secondary (two private, three government) and 14 primary (five private, nine government) schools. All schools were located in a country regional centre, 160 kilometres south of Perth, Western Australia. The participants were 172 students (93 females, 79 males) from Years 3, 7, 8, and 12 from two primary (one private, one government) and three secondary (one private, two government) schools. These targeted year levels comprised of, 38 Year 3 students (16 females, $\underline{M}$ age = 7.9 years; 22 males, $\underline{M}$ age = 7.9 years), 34 Year 7 students (18 females, $\underline{M}$ age = 11.9 years; 16 males, $\underline{M}$ age = 11.8 years), 57 Year 8 students (36 females, $\underline{M}$ age = 12.8 years; 21 males, $\underline{M}$ age = 12.7 years), and 43 Year 12 students (23 females, $\underline{M}$ age = 16.9 years; 20 males, $\underline{M}$ age = 17.1 years). It was considered an adequate cross-section of the student population was achieved, with an acceptable balance of student $\underline{N}$ between private and government schools (97 government school students, 76 private school students). However, $\underline{N}$ differences were found for some year and gender categories.

Apparatus

To examine gender and school year (independent variables) trends and patterns, a junior and senior version booklet containing three self-report anonymous questionnaires, and a general information sheet were used in the study:

(i) The Peer Relations Questionnaire (PRQ) (Rigby & Slee, 1994) was used to assess gender differences in direct and indirect forms of bullying;

(ii) The Pro-victim Scale (Rigby & Slee, 1991) was used to measure students attitudes toward victims of bullying, focusing on gender and school year differences; and,

(iii) The Victim Questionnaire, a self-developed scale, was used to assess students' helping behaviour toward a victim of bullying. (See Appendix A-1 for the Junior Booklet, and Appendix A-2 for the Senior Booklet).

The Peer Relations Questionnaire

The shorter version of the PRQ of 15 items (filler items were omitted), was used to measure peer relations between students. These items made up three sub-scales: (i) the Bully Scale, measuring the tendency to bully other children, (ii) the Victim Scale, measuring the tendency to be bullied by other students; and (iii) the Pro-social Scale, measuring the tendency to act in a pro-social manner toward peers. Participants were required to respond on a 4-point Likert scale ranging from *never* to *very often* (scored 1 to 4) to the items which described different forms of behaviour. For example, "I enjoy upsetting wimps" (Bully Scale); "I get called names by others" (Victim Scale); and, " I like to help others who are being picked on" (Pro-social Scale). An additional item to investigate the extent of indirect bullying was added to the Bully sub-scale, "Others spread nasty rumours about me".

Reliability for each sub-scale was found to be adequate, with alpha coefficients of 0.7 and over found when the questionnaire was administered to both primary and secondary students (Rigby, 1993; Rigby & Slee, 1993; Slee, 1994). Concurrent and discriminant validity was assessed by Rigby from student self-reports of: (i) the frequency and intent of their participation in bullying activities; (ii) the frequency of them being victimised, and (iii) the action taken by respondents when they witnessed

another student being bullied. The distinct grouping of the highest correlations (> 0.4) were significant for both genders (p <.001), for both the Bully and Victim Scales. Thus, validity for both these measures was supported. High correlations were also reported for the Pro-Social Scale. However, Rigby found small negative correlations (<.4), particularly for boys, between the Pro-social and Bully Scales.

The Pro-victim Scale

The Pro-victim Scale has 12 items measuring students attitudes toward victims of bullying. Previous research findings (Rigby & Slee, 1991) showed three distinct factors: (i) a tendency to despise the victims of bullies (eg. 'Kids who are weak are just asking for trouble'); (ii) general admiration for school bullies (eg. 'It's OK to call some kids nasty names'); and (iii) avowed support for intervention to assist the victim (eg. 'I like it when someone stands up for kids who are being bullied'). Participants were required to respond on a 5-point Likert scale from *strongly agree* to *strongly disagree,* scoring from 1 to 5 respectively. This 5-point Likert scale was extended from Rigby & Slee's (1991) original study which used a 3-point scale, ranging from *agree* to *disagree.*

Items about support for victims were reverse-coded to achieve consistency in the way all items were scored. For example, strong agreement with "It's OK to call some kids nasty names" indicates justifying bullying and is scored as 1. In contrast, strong agreement with "I like it when someone stands up for kids who are being bullied" indicates support for victims and is scored as 5. As reported by Rigby and Slee (1991), reliability was satisfactory with a Cronbach's alpha of .78. Discriminant validity was assessed by comparing children's scores on whether intervention or non-involvement toward bullying was the appropriate action to take by students and

teachers. A significant difference was found between children who supported positive action by teachers and students ($M = 49.51$, $SD = 5.83$), and children who held negative perceptions ($M = 45.35$, $SD = 7.85$. $t(643) = 3.90$, $p<.001$). However, analysis of findings for 'victim' items found no significance between the same two groups, supporters of intervention ($M = 2.65$, $SD = 2.60$), and proponents of no intervention ($M = 2.68$, SD 2.57, $t(643) = .11$, $p<.05$). Interpretation of these results suggested acceptable discriminant validity for the Pro-Victim Scale.

The Victim Questionnaire

The Victim Questionnaire was a self-developed questionnaire of eight items to measure students' overt helping behaviour toward victims of bullying. Based on certain characteristics of the victim, four of the items related to the victim's gender and age, and four on whether the victim was, a friend, disliked, 'different', or had no friends. Participants were required to respond *yes* or *no* to each item. For example, "Have you seen any of your friends bullied?". If participants answered *no*, they went onto the next question. If respondents answered *yes*, they were required to respond to another question, "When the kid being bullied was a friend, did you help your friend?" on a 4-point Likert scale ranging from *Never* (score 1) to *Always* (score 4). A qualitative component to this questionnaire asked for a reason for the action taken. A pilot study was conducted.

Ease of readability, particularly for Year 3 children, was included in the questionnaire development. While all participants were administered the same questionnaire, simplified language and larger print was used in the questionnaires for Year 3 students. Using the Flesch formula (Harrison, 1980) readability of the questionnaire, consent form, and information page were measured and found to be

age-appropriate. Year 7, 8, and 12 students were presented with questionnaires of "standard reading ease", while Year 3 children had "easy to very easy" readability.

Pilot study

Prior to the pilot study, a sample of 16 children (10 females, 6 males) aged from seven to sixteen years, responded to a list of 28 items (see Appendix B). To determine the likelihood of a child helping (or not helping) a victim of bullying, these items were based on specific features of the victim. For example, "The last time I saw a boy bullied, I helped the kid". The participants were required to respond 'yes' or 'no' to each item, and asked for feedback. Items that were considered 'unlikely to occur' by most children were deleted. For example, "The last time I saw a popular, or a strong, or a good-looking kid bullied, I helped the kid". The rationale given was that, popular, strong, and good-looking students do not get bullied. Other items considered by the respondents as measuring the same construct but were pertinent, were collapsed into one item. For example, "The last time I saw a kid of a different race, or with a physical/intellectual disability/deformity" was modified to "a kid who was 'different' to most other students".

The pilot study was conducted at a primary and a secondary school in a neighbouring town. It was geographically distant to minimise the risk of children participating in the pilot study communicating the nature of the study to others who may be involved in the study. Thus, the effects of contamination was minimised. The participants in the pilot and study samples were assumed to be culturally similar to each other. Both samples came from predominantly white, low to middle class adjacent rural communities. Permission was obtained from the principals of the primary and secondary schools for access to children from Years 3 and 7, and Years

8 and 12 respectively. The 89 participants were informed of the purpose and nature of the questionnaire.

The 9-item scale was found to have an acceptable internal consistency reliability. For each scale item, the item total correlations was positive and significant. Based on $N = 70$ (questionnaires with missing data were not included), the overall reliability of the scale was .87 as assessed by Cronbach's alpha (see Appendix C-1). Using the factor analysis procedure in Statistical Package for Social Sciences (SPSS) for Windows, a principal components analysis (PCA) with varimax rotation was performed on the nine helping variables. Two factors with eigenvalues greater than one were extracted, accounting for 62.4% of the variance (see Appendix C-2).

Factor 1, accounting for the highest proportion of the variance (50.1%), seemed to be concerned with children's 'social obligation', a tendency to help others they perceived as needing protection (eg. girls, friends, younger or 'different' children). Variables loading on Factor 2 appeared to reflect a lack of accountability to help those perceived as capable of looking after themselves (eg. boys, older kids, or no friends). Thus, the two factors appeared to make a distinction between students who were more likely to be helped and those who were not, based on the victim's characteristics.

A 2 x 4 (gender x year) between-subjects factorial ANOVA was conducted on the likelihood of a student helping a victim of bullying, dependent on characteristics of the victim. Assumptions of ANOVA were met, though Shapiro-Wilks test of normality found no significance for Year 12 females due to only 2 valid cases. A significant main effect was found for Year, $F(3,62) = 4.22, p < 0.01$. Post hoc comparisons using Tukey HSD test was used on the four cells for the variable Year,

which revealed the mean for helping behaviour for Year 8 students was significantly lower than for Year 3 children (see Appendix C-3).

The qualitative component of the study assessed the reason underlying whether a student helped (or did not help) a victim of bullying (see Appendix C-4). Interpretation of result findings indicated that most students expressed willingness to help when the bullied child was younger or a friend, and less inclined to help when the victim was older or disliked. Year 3 children, however, showed a stronger tendency to help victims "rejected" by the older participants, for example, older students, and kids with no friends.

Although there were no other significant pairwise differences, the pilot study findings showed promising scope for valuable future results, enhanced by a larger sample. The variable, 'class' was deleted from the final questionnaire as it did not appear to tap a victim characteristic, and also loaded on both factors. Assumptions of analyses were satisfactory. The high internal reliability of the questionnaire combined with the supportive findings of the qualitative component, were deemed satisfactory to continue with the study proper, after minor grammar modifications.

Ethics

Ethics approval for this study was granted by the Edith Cowan University Ethics Committee in July, 1996.

Procedure

A letter outlining the purpose and nature of the study was sent to prospective schools (see Appendix D-1). Consent was obtained from principals after they had all examined the questionnaires, and discussed details of the study with the researcher. Parental consent was obtained, with students given the option of giving their written

consent (see Appendix D-2). Students over the age of 17 years signed their own consent forms.

All testing was group administered during school hours by the researcher in a classroom setting. Primary schoolchildren participated in the study with children of their own year level, while secondary school students from Years 8 and 12 from two of the schools were administered the study together. This was considered the most viable option as participating Year 8 students came from different classrooms, and there were only a few participating Year 12 students from each school. The third secondary school had only Year 12 students participating.

Students were given a brief introduction of the purpose and nature of the study including, assurance of anonymity and confidentiality, acknowledgment of their voluntary participation, : id their right to withdraw from the study at any time. Definitions of bullying and helping behaviours were shown to students on overheads. Slee's (1995a) definition of bullying was used:

> Students sometimes bully weaker students at school by
>
> **deliberately** and **repeatedly** hurting or upsetting them in
>
> some way; for example, by hitting or pushing them around,
>
> teasing them, or leaving them out of things on purpose.
>
> But it is **not** bullying when two students of about the same
>
> strength have the odd fight or quarrel (p.321).

The researcher highlighted words such as, deliberately and repeatedly, to emphasise the intent and continuity of bullying. Similarly, the self-developed definition for helping had the words, remember and not, highlighted, to digress from

the general cultural norm of unfavourably perceiving children who 'snitched' or

'dobbed on their mates.' Helping was defined as:

> Helping another child being bullied can mean...
>
> standing up to the bully or bullies and telling them to stop.
>
> Taking the bullied kid away to a safe place.
>
> Helping can also mean telling a responsible adult someone
>
> is being bullied. **Remember**, this is **not** dobbing, it is
>
> getting help for someone who needs it.

The researcher adapted age-appropriate verbal information for the different year

levels. Participants were invited to ask questions. Questionnaires were handed out,

with students asked not to communicate or discuss their responses with their peers,

but to raise their hand if they were unclear of anything.

To familiarise the Year 3 children to the task, the researcher wrote and worked

through examples of each questionnaire on the blackboard. Each item was read out

loud by the researcher.

Students were asked to check they had answered each item before questionnaires

were collected. They were invited to ask questions or make comments on the topic of

bullying or content of the questionnaires. The participants were debriefed with a

short explanation of the study aims, and thanked for their involvement in the study.

Results

Data screening

Prior to all analyses, the Statistical Package for Social Sciences (SPSS) for Windows programme was used to screen data for analysis suitability. Data was coded by the independent variables, Gender and [school] Year (Years 3, 7, 8, and 12), and reverse coding was applied to negatively worded items. Missing data was not included in any analyses, unless otherwise stated. In these cases, listwise deletion was used. Shapiro-Wilks tests of normality (see Appendix), box plots, and z scores were examined for normality, distributions and outliers for all three questionnaires. Examination showed some skewing, however, it was not considered necessary to warrant data transformation (Keppel, 1991). Significant violations, however, will be reported where applicable. Univariate outliers were detected but were retained for analyses as they represented only a small portion of the 172 cases. One case was not included in the analysis due to consistent item responding.[1]

Reliability

Reliability coefficients (Cronbach's alpha) were found to be acceptable for all three questionnaires: The Pro-victim Scale, .79; Peer Relations Questionnaire (PRQ), .76; and, the Victim Questionnaire, .84 (see Appendix F).

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[1] This case was deleted from the study as all responses on each of the questionnaires were marked on the last answer of each item.

<u>Analyses strategies</u>

Factor Analysis and two-way ANOVA were the statistical analyses used for all three questionnaires. One-way chi-square was also used for the Pro-victim Scale and the PRQ.

Factor Analysis

Normality violations are not considered to seriously affect Factor Analysis when this analysis is used for descriptive purposes (Tabachnick & Fiddell, 1996). According to Tabachnick and Fiddell, while normal distributions enhance interpretation of results, violation does not necessarily mean the solution is deficient. With the exception of the Victim Questionnaire, sample sizes were adequate for Factor Analysis. Listwise deletion, as the highly recommended procedure, resulted in only 43 valid cases out of 172 cases for the Victim Questionnaire. While this small number may not be ideal, it was considered appropriate to continue with Factor Analysis as the general consensus of a minimum of five participants per variable was satisfied (Hair, Anderson, Tatham & Black, 1995)

For all questionnaires, the KMO Measure of Sampling Adequacy, and the Bartlett Test of Sphericity were found to be significant. These two significant measures quantify the degree of intercorrelations among variables, adding to the appropriateness of using Factor Analysis

Two-way ANOVA

Following Keppel's (1991) advice, two-way ANOVA was undertaken as it is considered robust to assumption violations, particularly when numbers in each cell are large enough and approximately equal (as they are in this study). In conducting

two-way ANOVA, a few assumptions of homogeneity were violated, and were

addressed as they arose.

Chi-square

Assumptions were deemed satisfactory for chi-square.

The SPSS for Windows programme was used for all analyses.

The Pro-victim Scale

The 12 attitude items were analysed by Factor Analysis, using the principal

components analysis (PCA) with quartimax rotation (Appendix G). Three factors

with eigenvalues greater than one were extracted, accounting for 52.4% of the

variance. The factor loadings, communalities ($h2$), and percentages of variance

explained after quartimax rotation are shown in Table 1.

Table 1

Quartimax Rotated Factor Loadings for Attitude Items

| | Factors | | | |
Item	1	2	3	h2
Soft kids make me sick	.75	..	..	.62
Fun to see kids get upset	.73	..	..	.63
Picked on kids deserve it	.69	..	..	.48
Nobody likes a wimp	.69	..	..	.52
Weak kids ask for trouble	.63	..	..	.42
OK to call kids nasty names	.61	..	..	.53
Kids shouldn't complain	.40	..	..	.36
A bully is really a coward	..	.76	..	.65
I get angry when kid picked on	..	.72	..	.55
I like it when kids stood up for	..	.49	..	.47
Good to help defenceless kids	..	.45	..	.44
Not friend with pushed around kid	..	..	.75	.62
% of variance	31.6	11.7	9.1	52.4
Label	Justification	Support	Rejection	

N = 160, (86 female, 74 male).

As can be seen from Table 1, the items clustering on Factor 1 reflected positive attitudes toward bullying by justifying bullying acts (eg. "It's OK to call some kids nasty names"), and the rejection of victims (eg. "Kids who get picked on a lot usually deserve it"). This factor was labelled Justification. Items loading on Factor 2 indicated support for victims of bullying (eg. "It makes me angry when a kid is picked on for no reason"), and was labelled Support. One item loaded on Factor 3, also reflecting rejection of victims ("I wouldn't be friends with kids who let themselves be pushed around"), thus, was labelled Rejection.

To examine schoolchildren's attitudes toward victims of bullying, the Pro-victim Scale responses, 'Strongly agree' and 'Agree', and Strongly disagree' and 'Disagree' were combined respectively. The response, 'Unsure' was entered independently. A one-way chi-square revealed a significant difference in children's support for victims on the Support sub-scale, χ^2 (2, $\underline{N}$ = 162) = 124.47, $\underline{p}$ < .001. As can be seen in Table 2, a large proportion of students reported supportive attitudes toward victims of bullying.

Table 2.

<u>Frequency of Students' Supportive Attitudes Toward Victims (Support sub-Scale)</u>

Attitude	$\underline{N}$	%
Supportive	152	88.4
Non-supportive	10	5.8
Neutral/Missing	10	5.8
Total	172	100.00

$\underline{p}$ < .001.

On examination of the Justification for bullying sub-scale, a one-way chi-square showed a significant difference in children's justification of bullying, χ^2 (2, $\underline{N}$ = 155) = 110.71, $\underline{p}$ < .001. Table 3 shows the majority of students reported not justifying bullying.

Table 3

Frequency of Students' Attitudes toward Justification of Bullying (Justification sub-Scale)

Attitude	$\underline{N}$	%
Justification	12	7.0
Non-justification	143	83.1
Neutral/Missing	17	9.9
Total	172	100.00

$\underline{p}$ < .001.

To investigate gender and school year differences of students' attitudes toward victims of bullying, a 2 x 4 (Gender x Year) ANOVA was conducted on the Support sub-scale (see Appendix G-2). No significance was found for the variable Year, indicating there were no differences in support for victims between the year levels. A significant main effect was found for Gender, $\underline{F}$(1,162) = 13.02, $\underline{p}$ < .01. This result indicated females ($\underline{M}$ = 1.6) were found to be significantly more supportive toward victims of bullying than males ($\underline{M}$ = 1.9).

Peer Relations Questionnaire

Shapiro-Wilks test of normality (see Appendix E) revealed four of the eight cells did not meet normality requirements, and were slightly positively skewed: Year 12 females (N = 22), Year 3 males (N = 17),Year 8 males (N = 21), and Year 12 males (N = 19).

A PCA with varimax rotation was used to examine the distinct factors of the PRQ (see Appendix H-1). Three factors were extracted with eigenvalues over .1, accounting for 56.6% of the variance. Factor 1 reflected a tendency to be a victim (eg. "Others make fun of me"), labelled the Victim sub-scale; Factor 2 reflected a tendency to be a bully (eg. "I enjoy upsetting wimps"), labelled the Bully sub-scale; and, Factor 3 reflected a tendency to be pro-social (eg. "I enjoy helping others"), labelled the Pro-social sub-scale. Factor loadings, communalities ($h2$), and variance percentages are shown in Table 4.

Table 4

<u>Varimax Rotated Factor Loadings for Peer Relation Items</u>

| Item | Factor | | | |
	1	2	3	h2
[a] I get picked on by others	.82	...	...	.73
[b] I get called names by others	.82	...	...	.70
[c] Others make fun of me	.78	...	...	.67
[d] I get hit and pushed by others	.67	...	...	.51
[e] Others leave me out on purpose	.64	...	...	.49
[f] Others spread rumours about me	.63	...	...	.41
I enjoy upsetting wimps	...	.83	...	.73
I like to make others scared	...	.76	...	.61
I like to get in an easy fight	...	.75	...	.60
I like to show others I'm the boss	...	.73	...	.55
I am part of group who tease others	...	.72	...	.52
I enjoy helping others	...	...	.75	.63
I like to help harassed people	...	...	.75	.63
I share things with others	...	...	.66	.45
I like to make friends	...	...	.49	.27
% of variance 56.6	28.9	16.4	11.3	
Label	Victim	Bully	Pro-social	

<u>N</u> = 162 (89 females, 73 males)

To investigate the dynamics of students' peer relations, the PRQ responses, 'never' and 'once in a while', and 'pretty often' and 'very often' were combined respectively. Analysis of the Pro-social sub-scale using a one-way chi-square revealed a significant difference between children's reported pro-sociability, χ^2 (1, $\underline{N}$ = 168) = 156.22, $\underline{p}$ < .001. As can be seen in Table 5, most children reported the tendency to act pro-socially toward peers.

Table 5

Frequency of Students' Responses on the Pro-social sub-Scale

Pro-social	$\underline{N}$	%
To be pro-social	165	95.9
Not to be pro-social	3	1.7
(Missing)	4	2.3
Total	172	100.00

p < .001.

The Bully sub-Scale was analysed using one-way chi-square, revealing a significant difference in the number of students' reporting tendency to bully, χ^2(1, $\underline{N}$ = 151) = 127.95, $\underline{p}$ < .001. As can be seen in Table 6, the majority of schoolchildren reported not holding the tendency to bully other students.

Table 6

Frequency of Students' Responses on the Bully sub-Scale

Bully	N	%
To bully	6	3.5
Not to bully	145	84.3
(Missing)	21	12.2
Total	172	100.00

p < .001.

Analysis of the Victim sub-scale using one-way chi-square showed a significant difference in the number of students reporting the tendency of being victims of bullying, χ^2 (1, N = 136) = 85.76, p < .001. As can be seen by Table 7, the majority of children reported not being victims.

Table 7

Frequency of Students' Responses on the Victim sub-Scale

Victim	N	%
To be a victim	14	8.1
Not to be a victim	122	70.9
(Missing)	36	20.9
Total	172	100.00

In order to look specifically at the Victim sub-scale for direct (Items a, b, c, and d in Table 4), and indirect forms of bullying (Items e and f in Table 4), a 2 x 4 (Gender x Year) ANOVA was performed for each item (Appendix H-2). Descriptive statistics for all significant analyses by items are shown in Table 8.

Interpretation of results from the item, 'Names' ("I get called nasty names by others"), found a significant main effect for Gender,: $F(1, 162) = 5.04$, $p < .05$. This result indicated a significantly higher incidence of name calling reported by males ($M = 2.38$) than females ($M = 2.07$). No significant differences were found for Year levels.

Examination of the item, 'Hitnpush' ("I get hit and pushed by others"), found significant main effects for both Gender, $F(1, 162) = 7.85$, $p < .01$; and Year, $F(3, 162) = 8.56$, $p < .01$. Due to violation of homogeneity, Kruskal-Wallis Non-parametric Alternative to One-way ANOVA was conducted: Kruskal-Wallis Chi-Square approximation, corrected for ties, $\chi^2(3, N = 170) = 22.94$, $p < .05$. Physical bullying was significantly higher for males ($M = 1.78$) than for females ($M = 1.41$). Post hoc comparisons using the Tukey HSD test revealed significant differences between Year 3 and Year 12 students, and Year 3 and Year 8 students, indicating Year 3 children reported being subjected to significantly higher incidences of physical bullying, than Year 12 and Year 8 students.

Investigation of the item, 'Exclude' ("Others leave me out on purpose") revealed a significant main effect by Year, $F(3,161) = 2.95$, $p < .05$. No significance was found for the variable, Gender. A Kruskal-Wallis non-parametric alternative to the One-way ANOVA was performed due to violation of homogeneity: The Kruskal-Wallis Chi-Square approximation, corrected for ties, $\chi^2(3, N = 169) = 6.65$, $p < .05$.

Post hoc comparisons using the Tukey HSD test found a significant difference

between Year 3 and Year 12 students, indicating Year 3 children reported higher

incidence of exclusion than Year 12 students.

Table 8

Mean Scores for Statistically Significant Forms of Bullying

Variable	Group	$\underline{n}$		$\underline{M}$	$\underline{SD}$
[b] Names	Gender *	Female		2.07	
		Male		2.28	
[d] Hitnpush	Year 12 **	42		1.28	.51
	Year 8 **	56		1.41	.63
	Year 7	34		1.70	.67
	Year 3 **	38		2.05	.96
	Gender **	Female		1.41	
		Male		1.78	
[e] Exclusion	Year 12*	42		1.71	.84
	Year 7	34		1.76	.60
	Year 8	56		1.77	.87
	Year 3 *	37		2.24	1.09
[f] Rumours	Year 12 *	42		1.69	1.77
	Year 8	57		1.79	.77
	Year 7	34		1.67	.68
	Year 3 *	38		2.39	1.03

Variable: Exclusion ($\underline{N}$ = 169, females, males); Hitnpush ($\underline{N}$ = 170, females, males); Names ($\underline{N}$ = 170, females, males); Rumours ($\underline{N}$ = 171, females, males). *$\underline{p}$ < .05; **$\underline{p}$ <.01

Analysis of the item, 'Rumours' (Others spread nasty rumours about me') found a significant main effect for the variable, Year, $F(1, 163) = 2.90$, $p < .05$. Kruskal-Wallis analysis was conducted due to violation of homogeneity, Kruskal-Wallis Chi-Square approximation, corrected for ties, χ^2 (3, N = 171) = 17.81, $p < .05$. Post hoc pairwise comparisons using the Tukey HSD test found students self-reports of rumours targeted toward them was significantly higher for Year 3 children than for Year 12 students. No significance was found for the variable, Gender.

No significant main effects of interactions were found for the items, Makefun ('Others make fun of me'], or Pickedon ('I get picked on by others').

Victim Questionnaire

Shapiro-Wilks test of normality (see Appendix E) revealed one cell, the Year 3 female group (.44) violated normality.

Factor analysis using the PCA method with varimax rotation was used (Appendix I-1). Two factors with eigenvalues greater than one were extracted, accounting for 62.3% of the variance. Factor loadings, communalities (h2) and variance percentages are shown in Table 9.

Accounting for the highest proportion of the variance (48.0%), Factor 1 seemed to reflect social norms, a 'socially acceptable' expectation to help others deemed as 'helpless' or needing protection (eg. girls or younger children). Therefore, this factor was labelled Social Obligation. In contrast, Factor 2 reflected a lack of responsibility toward the recipients of bullying behaviour (eg. older or disliked students), and was labelled Accountability.

Table 9

Varimax Rotated Factor Loadings for Helping Variables

Item	Factors		
	1	2	h2
When the student being bullied was:			
younger, did you help that child?	.79	...	.66
a girl, did you help her?	.79	...	.65
a friend, did you help your friend?	.75	...	.66
'different', did you help that student?	.58	...	.41
disliked by you, did you help him/her?	...	.84	.71
a boy, did you help him?	...	.75	.67
older, did you help that student?	...	.73	.60
friendless, did you help him/her?	...	.67	.62
% of variance	48.0%	14.3%	62.3%
Label	Social obligation	Accountability	

$\underline{N}$ = 43 (24 females, 19 males).

To investigate the extent of helping behaviour toward victims, cases with six or more responses were analysed using two-way (Gender x Year) between-subjects ANOVA (see Appendix I-2). This was deemed a necessary and adequate procedure due to the small number ($\underline{N}$ = 43) of participants responding to all eight items. Therefore, an adequate sample size of one hundred and four participants were included in this analysis (57 females, 47 males).

A statistically significant result was found for helping behaviour and the variable

Year, $F_{(3, 96)} = 8.10$, $p < .01$. Post hoc comparisons using Tukey HSD test found

significant differences between Year 3 children and Year 8 students; Year 3 children

and Year 12 students; and Year 7 children and Year 8 students. This main effect

showed higher means were found for Year 3 and Year 7 children than Years 8 and 12

students. Interpretation of these result indicated Year 3 children reported

significantly higher incidence of helping than Years 8 and 12 students; and Year 7

children reported significantly higher incidence of helping than Year 8 students. No

significance was found for the variable, Gender. Descriptive statistics are shown in

Table 10.

Table 10

Mean Scores for Helping Behaviour by Year

Group	n	M	SD
Year 8	39	2.39	.69
Year 12	27	2.50	.59
Year 7	17	2.94	.47
Year 3	21	3.06	.68

$N = 104$ (57 females, 47 males).

To further investigate victim helping behaviours, two-way (Gender x Year)

between- subjects ANOVA were conducted on individual Victim Questionnaire

items (see Appendix I-3).

For the variable, Boy, ('When the student being bullied was a boy, did you help him?'), a significant main effect for Gender was found, $F(3, 134) = 5.35$, $p < .05$. The higher mean for males ($N = 70$, $M = 2.42$) was higher than females ($N = 72$, $M = 1.98$), indicating males help other males more than females help males. No effect was found for the variable, Year.

Examination of results for the variable Dontlike, ('When the kid being bullied was someone you didn't like, did you help that disliked kid?') showed a significant main effect for Year, $F(3, 126) = 3.54$, $p < .05$. Post hoc comparisons using Tukey HSD test found a significant difference between Year 3 and Year 8, indicating Year 3 children reported helping disliked students being bullied more than Year 8 students helped the same. No significance was found for the variable, Gender. Descriptive statistics are shown in Table 11.

Table 11

Mean Helping 'Dontlike' Scores by Year

Group	n	M	SD
Year 8	48	1.79	.74
Year 12	35	1.91	.81
Year 7	27	2.22	.80
Year 3	24	2.37	1.24

$N = 134$ (72 females, 62 males).

Analysis of the variable, Girls, ('When the kid being bullied was a girl, did you help her?'), found both main effects and the interaction to be significant: Gender $F(1,$

118) = 6.34, $p < .05$; Year $F(3, 118) = 3.43$, $p < .05$; and interaction between Year by

Gender, $F(3, 118) = 5.40$, $p < .01$. The graph in Figure 1 illustrates the interaction.

Post hoc comparisons using Tukey HSD test revealed that the mean helping

behaviour for Year 3 boys was significantly lower than Year 3 girls. These results

indicated helping behaviour toward girl victims was more likely to occur among

Year 3 girls than for Year 3 boys. Descriptive statistics are shown in Table 12.

Examination of the graph suggests boys' helping behaviour toward a girl being

bullied is low at Year 3, higher at Year 7, decreases sharply at Year 8, and increases

by Year 12. In contrast, the pattern shown of girls helping behaviour toward a girl

being bullied stays relatively constant in primary school, decreases sharply at Year 8,

and gradually declines at Year 12.
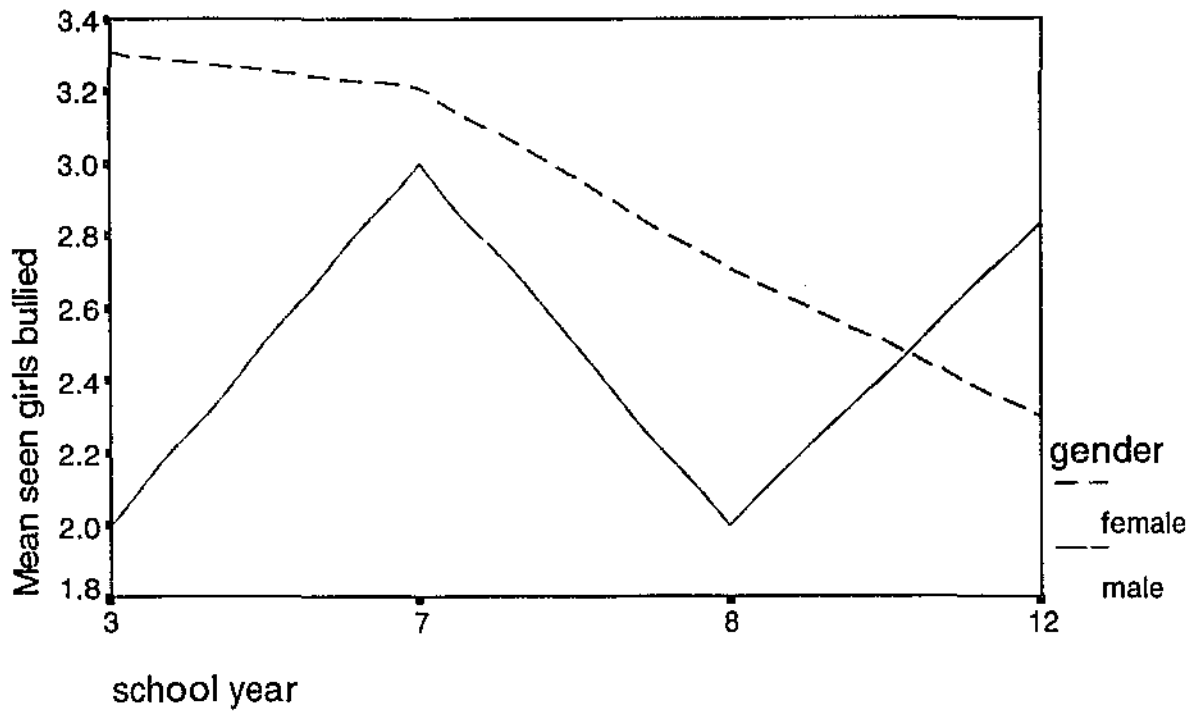
Figure 1. Interaction of the item Girl, ('When the kid being bullied was a girl, did

you help her?'), Gender by School Year.

Table 12

Mean 'Girls' Helping Scores as a Function of Gender and Year

| | Gender | | | | | | |
| | Female | | | Male | | | Total |
Year	$\underline{M}$	$\underline{n}$	$\underline{SD}$	$\underline{M}$	$\underline{n}$	$\underline{SD}$	$\underline{M}$
3	3.31	13	.85	2.00	12	1.13	2.65
7	3.22	14	.58	3.00	9	.71	3.11
8	2.71	31	.86	2.00	15	1.07	2.35
12	2.30	20	.81	2.83	12	1.03	2.56

$\underline{N}$ = 126 (78 Females, 48 Males)

Examination of the item, Nofrends ('When the kid being bullied was friendless, did you help that kid?') revealed a significant main effect for the variable Year, $\underline{F}(3, 128) = 4.75$, $\underline{p} < .01$. Post hoc comparisons using Tukey HSD test revealed the only significant difference was between Year 3 and Year 8 students. This result indicated Year 3 children reported higher incidence of helping children with no friends than Year 8 students. No significance was found for the variable, Gender. Descriptive statistics are shown in Table 13.

Table 13

Mean Helping 'Nofrends' Scores by Year

Group	n	M	SD
Year 8	48	2.25	1.04
Year 12	34	2.41	.93
Year 7	27	2.71	.92
Year 3	27	2.96	.99

N = 136 (70 females, 66 males).

Analysis of the item, Olderkid ('When the student being bullied was older than you, did you help that student?") showed a significant main effect by Year, $F(3, 92)$ = 10.84), $p < .01$. Post hoc comparisons using Tukey's HSD test found significant differences between Year 3 and Year 7, 8, and 12 students, indicating a higher helping score was achieved by Year 3 children than by students in Years 7, 8 and 12. Descriptive statistics are shown in Table 14.

Table 14

Mean Helping 'Olderkid' Scores by Year

Group	n	M	SD
Year 8	37	1.72	1.73
Year 12	24	2.08	.72
Year 7	19	2.11	.87
Year 3	20	3.05	1.05

N = 100 (54 females, 46 males).

Investigation of the item, Youngkid ("When the child being bullied was younger than you, did you help that child?") found a significant interaction for Year by Gender, $F(3, 117) = 3.83$, $p < .05$. Figure 2 shows a graph of the interaction. Kruskal-Wallis Non-parametric Alternative to the One-way ANOVA was conducted due to violation of homogeneity. However, the Kruskal-Wallis statistic was not significant. It was deemed further interpretation of results was considered inappropriate as the results would be considered highly unreliable. Therefore, the descriptive statistics provided in Table 15 should be treated with caution.

Table 15

Mean 'Youngkid' Helping Scores as a Function of Gender and Year

	Gender						
	Female			Male			Total
Year	M	n	SD	M	n	SD	M
3	3.00	9	1.32	3.06	16	.85	2.65
7	3.23	13	.73	3.36	14	.63	3.11
8	3.41	27	.57	2.36	14	1.08	2.35
12	2.82	17	.88	2.86	15	.83	2.56

N = 125 (66 females, 59 males).

No significant main effects or interactions were found for the variables, Frends (N 123) and Diffrent (N 109).
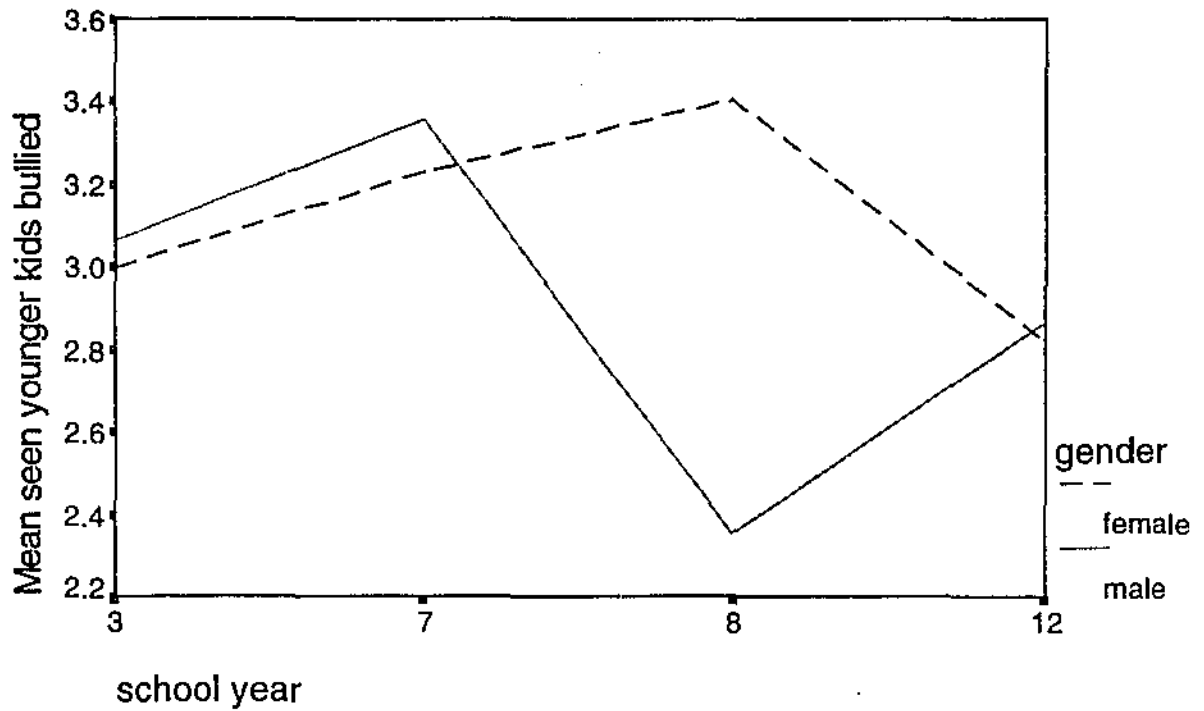
Figure 2 Interaction for the item Younger ('When the child being bullied was

younger than you, did you help that child?), Gender by Year.

Qualitative Data

The optional component for participants to give a reason to why a student would help, or not help a victim of bullying, are given in Table 16. Reasons were tabulated when five or more participants gave the same response. As can be seen in Table 16, students most likely to elicit a helping response from other students were, friends, followed by younger children, girls and 'different' children. Students least likely to be helped were older students, children with no friends, disliked students, and boys.

The more common responses to not helping a victim when looked at across items were, fear of retaliation, the student was self-sufficient, and it was socially inappropriate to help. These responses applied to older students, boys, and to children with no friends. The more common positive responses were because the victim was getting hurt and needed support. More negative responses toward helping a victim of bullying were elicited by Year 8 students, with least negative responses from Year 3 children.

Table 16

Reasons given for helping or not helping victims of bullying by Year

Variable	Year 3		Year 7		Year 8		Year 12	
	M	F	M	F	M	F	M	F
Friend								
Helped because:								
friend was hurt/support/care	13	9	9	10	5	20	9	12
Older								
Helped because:								
student getting hurt/good thing	4	4	-	-	-	-	-	-
Didn't help:								
fear of retaliation	-	-	2	5	6	7	3	2
student was self-sufficient	-	-	4	1	2	2	3	3
Girl								
Helped because:								
she was getting hurt/upset, needed support/help	1	6	6	8	4	13	10	-
chivalry, 'to score'	-	-	-	-	-	-	5	-
Didn't help because:								
she deserved it	-	-	-	-	1	4	-	-
none of my business	-	-	-	-	-	-		6

Table 16 (cont'd)

Reasons given for helping or not helping victims of bullying by Year

Variable	Year 3		Year 7		Year 8		Year 12	
	M	F	M	F	M	F	M	F
Dontlike								
Helped because:								
student getting hurt/support	3	3	2	5	2	3	3	3
Didn't help because:								
student didn't deserve help	5	1	1	4	2	8	4	7
didn't like victim	-	-	-	-	2	5	-	-
Different								
Helped because:								
Felt sorry, victim needed help	2	4	6	4	4	13	7	6
Didn't help because:								
socially inappropriate to help	-	-	-	-	2	3	-	-
Younger								
Helped because:								
student needed protection	3	3	7	10	5	19	4	11

Table 16 (cont'd)

Reasons given for helping or not helping victims of bullying by Year

Variable	Year 3		Year 7		Year 8		Year 12	
	M	F	M	F	M	F	M	F
Boys								
Helped because:								
was a friend getting hurt	4	3	4	1	2	6	3	3
Didn't help because:								
socially inappropriate	-	-	-	7	-	5	-	-
boys are self-sufficient	-	-	-	-	1	6	3	3
fear of retaliation	-	-	-	-	3	5	-	-
No friends								
Helped because:								
to offer friendship/care	2	4	3	6	-	-	-	-
felt sorry/needed support	-	-	-	-	2	13	5	4
Didn't help because:								
socially inappropriate to help	-	-	5	3	7	5	-	-

Discussion

Interpretations of the results of this study, support four of the seven proposed hypotheses. These findings were that: the majority of schoolchildren hold supportive attitudes toward victims of bullying; girls show more supportive attitudes than boys toward victims of bullying; the majority of students act in a pro-social manner toward their peers; and, boys show higher incidence than girls of direct bullying. The three hypotheses not supported were: Year 3 children show more supportive attitudes than Years 7, 8, and 12 students toward victims of bullying; girls show higher incidence than boys of being victims of indirect bullying; and, Year 3 children show more positive forms of helping behaviour toward victims of bullying than Years 7, 8, and 12 students. However, results suggest that a difference exists between primary (Year 3 and Year 7) and secondary (Year 8 and Year 12) school students.

It was considered unnecessary to examine prevalence of bullying in the present study, as it was accepted bullying is global and occurs in all schools (Boulton & Underwood, 1992; Callaghan & Joseph, 1995; Hoover, Oliver, & Hazler, 1992; Perry, Kusel, & Perry, 1988; Rigby & Slee, 1991; Whitney & Smith, 1993). However, to compare previous urban Australian research findings to a rural setting, schoolchildren's attitudes toward victims of bullying, and the dynamics of schoolchildren's peer relations were investigated. As cautioned by Smith (1991), comparisons across studies should be treated carefully due to the subjective nature of social interactions. Interpretations of previous research findings have shown the use of the same questionnaire can produce inconsistent results, even between culturally similar schools (Siann et al., 1994). Thus, comparisons from past research and the present study were made cautiously.

Schoolchildren's attitudes toward victims of bullying

A replication and extension of Rigby and Slee's (1991) study was conducted to investigate the underlying structure of schoolchildren's attitudes toward victims of bullying. Like Rigby and Slee, the present study extracted three factors. However, some differences emerged as not all items loaded on the same factors as the original study. Rigby and Slee had found the following three factors: rejection of victims, justification of bullying acts, and, support for victims. The present study found only one distinct factor, 'support for victims' that was consistent with the Rigby and Slee study. If this sample was representative of rural schoolchildren, this result would suggest urban and rural children hold similar positive attitudes toward victims of bullying. The factor with the largest variance accounted for a combination of 'rejection of victims', and 'justification of bullying' items. Only one item loaded on the third factor, related to rejection of victims. These differing results may be attributable to a number of factors, such as, the urban/rural aspect, or the knowledge of participants on the topic of bullying. Interpretations at this stage can merely be speculative.

Schoolchildren's peer relations

The Peer Relations Questionnaire has been used in several urban Australian studies (Rigby & Slee, 1993; Slee, 1995a; Slee, 1995b) to investigate the dynamics of children's peer relations. These studies have shown consistent findings of three distinct factors: to bully others, to be a victim, and to act in a pro-social manner toward others. Results interpretations from the present study verified previous research findings, indicating that these three tendencies are largely independent of each other. The results also infer the underlying attitudes held by schoolchildren may

generalise from urban to rural areas, suggesting the PRQ is a reliable measure. This finding is consistent with suggestions that more culturally homogenous countries have been found to have little variation between urban and rural areas (Besag, 1989; House of Representatives Standing Committee on Employment, Education & Training, 1994).

Schoolchildren's pro-victim attitudes

For the first hypothesis, the typical supportive attitudes of schoolchildren toward victims of bullying as reported by Boulton and Underwood (1992), and Rigby and Slee (1991), were found in the present study. Most schoolchildren (88.4%) reported holding supportive attitudes. In contrast, only 5.8% reported not holding supportive attitudes toward victims. Furthermore, 83.1% of students did not justify bullying acts, with only 12% reporting acceptability of bullying. These positive attitudes were consistently higher than Rigby and Slee's findings of approximately 60% of children who endorsed support for victims and did not justify or admire bullying. It is indicative, however, that there are a few children who hold low levels of support toward victims of bullying as previously found by Rigby and Slee.

Even though the same questionnaire was used in both studies, interpretation can only be speculative. As cautioned by Smith (1991), comparisons across studies should be treated carefully due to the subjective nature of social interactions. The differences may be attributable to many factors, such as: urban versus rural settings, by whom or how the investigation was conducted, and, preconceptions or definitions of what entails a bullying act. Another speculation could be the wider 5-point scale used in this study (Strongly agree to Strongly disagree) as opposed to Rigby and Slee's 3-point scale (Agree to Disagree).

Girls supportive attitudes toward victims of bullying

Girls, more than boys, were found to be more supportive of victims of bullying. This second hypothesis is in line with much previous research which has found females are generally more empathic toward victims of aggression (Boulton & Underwood, 1992; Frodi, Macauley, & Thorne, 1977; Rigby & Slee, 1991; Whitney & Smith, 1993). Lagerspetz and Bjorkqvist (1994) have suggested social expectations and norms of the 'traditional' female role of caregiver and nurturer is a dominant factor in displays of care and empathy. According to Hoffman (1977) girls are socially conditioned to acquire and display empathy and compassion. In contrast, boys are encouraged to develop instrumental, rather than expressive characteristics such as, mastery and problem-solving. Sanson et al.'s (1993) eight year longitudinal study also found no significant differences in aggressive behaviour between female and male babies, and toddlers. Differences however, occurred as these children grew older, with boys displaying more aggressive behaviour than girls. Arguably, research evidence indicates the strong influence of socialisation shapes a large part of human behaviour. People generally act and behave in ways that are socially acceptable, whether it be for age or gender. Taking Bretherton et al.'s (1993) advice, gender roles should be re-evaluated and accepted that not everyone is equally socialised into gender stereotypes.

Year 3 children's supportive attitudes toward victims of bullying

The prediction that Year 3 children would show more supportive attitudes toward victims of bullying than Years 7, 8, and 12 students was not supported. At present, research on children's helping behaviour toward victims of bullying is limited. However, evidence exists that shows younger children are more overtly assertive in

rejecting hostile or negative intentions toward themselves or others than older

children. Kalliopuska (1992) found junior and pre-school children exhibited more

helping and responsible behaviour for the welfare of others than older students. It has

also been argued as children grow up, they become enculturated in a male-dominated

school ethos which professes tough-minded and insensitive attitudes toward others

(Askew, 1989; Keise, 1992). Based on this rationale, it was anticipated younger

primary children would hold similar attitudes as displayed by their behaviour.

Schoolchildren's peer relations

Most schoolchildren were found to act pro-socially toward their peers. In support

of the fourth hypothesis, interpretation of results found 95.9% of students reported

positive social interactions within their peer group as opposed to 1.7% of students.

Further exploration of data revealed 84.3% also reported not justifying bullying, with

3.5% of students supporting bullying activities. These results reflect previous result

findings (Boulton & Underwood, 1992; Rigby & Slee, 1993) that while most

children value positive peer relations, there are a few children with low pro-

sociability levels.

Direct and indirect bullying

As predicted by the fifth hypothesis, boy victims were found to be more subjected

to direct forms of bullying than girl victims. Examination of the results show boys

reported being physically bullied and experienced name calling more than girls.

These findings are in unison with previous studies that have shown boys to be more

prominent than girls in physical bullying activities (Besag, 1989; Boulton &

Underwood, 1992; Olweus, 1994a; Smith, 1991). The socially accepted male

characteristic of 'status assertion by physical dominance' is demonstrated. A review

of the results also show differences in some school year levels, as Year 3 children reported being subjected to physical bullying more than Year 8 and 12 students. As previous research has shown smaller children are more vulnerable and at-risk to attacks from peers and older children ((Rigby & Slee, 1991).

Recent research evidence that has found girls to be more implicated in bullying when indirect measures are used, was not supported by the sixth hypothesis. No gender differences were found for the indirect forms of peer abuse, namely, exclusion from the peer group, and rumour-mongering. Crick and Grotpeter (1995) had proposed children use effective means which negatively impact on the valued goals of their same-gender peers. Boys are more likely to use overt forms to hurt a peer, while girls tend to use more subtle means, such as ostracism. The rejection of this hypothesis is consistent with Besag's suggestion that girls may either be unaware, or unwilling to admit to being a victim or perpetrator of bullying activities.

Schoolchildren's helping behaviour toward victims of bullying

While the previous aims and hypotheses investigated past research findings, the last hypothesis focused on whether children's positive self-reports of attitudes transferred to overt behaviour. The distinction between children's overt and covert helping attitudes is unclear. Thus, the Victim Questionnaire was developed to extend previous research by tapping students' overt action (or inaction) when a witness to another student being bullied.

Examination of the Victim Questionnaire revealed two factors underlying the structure of children's helping behaviour toward a victim of bullying, based on a specific characteristic of the victim. The characteristics that clustered on the first factor included groups of children that are likely to be socially considered in need of

help or protection. These children were: younger students, girls, friends, and 'different' children. In contrast, characteristics that loaded on the second factor were likely to be socially attributed to children who were considered self-reliant, or students others may have feelings of no responsibility. These children were: disliked children, boys, older students, and friendless children. These factors may be considered to reflect societal norms and values that regulate and shape human behaviour. For example, as Askew (1989) suggested, social conditioning would strongly influence and motivate helping children with characteristics in the first factor. On the other hand, a child with one or more characteristics in the second factor, would be less likely to be helped as societal norms dictate the 'appropriateness' of action (Rigby & Slee, 1991).

Qualitative analysis

The qualitative component of the present study, supported the quantitative result findings. The way the two abovementioned factors clustered together, matched the way students responded in the qualitative component of the study. For example, students most likely to elicit a helping response from other students were: friends, younger children, girls, and 'different' children. The more common responses were because the student was being hurt and needed support. On the other hand, students less likely to be helped in a bullying situation were: older students, children with no friends, disliked students, and boys. Fear of retaliation, the perception the student concerned could fend for him/herself, and the inappropriateness to intervene were the more common responses given to reasons for not helping. While it is acknowledged this was optional for participants to complete this section of the study (and not all students responded), it gives an indication of some of the underlying dynamics of

peer social interactions. The value obtained from qualitative data can often add value and enhance quantitative results.

Year 3 children's helping behaviour toward victims of bullying

The prediction Year 3 schoolchildren would show more positive forms of helping behaviour toward victims of bullying than their older cohorts was not supported. However, interpretation of the results showed Year 3 children reported more helping behaviour than Year 8 and Year 12 students, and Year 7 children reported more incidence of helping than Year 8 students. While the hypothesis was not fully supported, the implications of differences between primary and secondary school exist. To explore this prospect, individual items were examined.

The finding that male students reported helping boys, more than females reported helping boys, (in a bullying situation), suggests a gender-bias concept that is socially-based. It is more socially appropriate for boys, rather than girls, to help a male student being bullied. This was reflected in responses given in the qualitative component. While equal numbers of males and females reported helping behaviour toward boys (13 girls, 13 boys), an equal number of students (19 girls, 7 boys) reported not helping. Year 8 girls indicated the least likelihood of helping boy victims.

Disliked children, and children with no friends who were bullied were more likely to be helped by Year 3 children than Year 8 students. While interpretation can only be speculative, these results suggest younger children may feel responsible for the welfare of others, (including a child they didn't like and also a child they weren't friendly with). Perhaps being a more 'high-risk' group targeted for bullying, Year 3 children are able to experience another person's pain as they have similarly suffered.

This would support Kalliopuska's (1992) findings that empathy has been found to be positively associated with age in early school years. The research has been inconsistent in this area for older children and adolescents. Furthermore, the normative pressure of male-dominated school ethos, as argued by several social theorists (Askew, 1989; Keise, 1992; Smith, 1991) strongly suggests schoolchildren are enculturated to adopt unsympathetic attitudes toward victims. This was again reflected in responses elicited for helping or not helping a victim. While a number of Year 8 students affirmed they had helped a disliked, or friendless peer being bullied, there were more negative responses given. Year 3 children gave more positive than negative responses.

An interesting gender and school year pattern was found from the results regarding students' helping girls and younger children seen bullied. Both patterns exhibit similar trends for boys, with low helping behaviour at Year 3 and Year 8, while Year 7 and Year 12 students showed higher levels of helping behaviour. Girls showed relatively consistent helping behaviours, except for a decrease in Year 12. Interpretations for 'younger children', however, need to be treated cautiously, as these results may be unreliable (due to analysis assumption violations).

Year 3 girls were found to be more likely to help a bullied girl than Year 3 boys. Like the results found for helping boys, this could be attributed to a gender bias concept, again reflecting social norms of appropriate behaviour. The pattern of helping behaviour suggests boys at Year 3 level exhibit low helping behaviour toward bullied girls, increase at Year 7, drop sharply at Year 8, and increase again by Year 12. The pattern for girls helping behaviour toward bullied girls suggests high consistent helping during primary school, a distinct decrease in Year 8, followed by a

gradual decline in Year 12. When the lines for both boys and girls are compared, the most striking observation is the sharp decrease from Year 7 to Year 8 students helping behaviour toward bullied girls. This observation parallels previous research findings of increased bullying in the first two years of high school when compared with the last year of primary school (Rigby, 1994). Not only do these students have to cope with a new school environment, they are now the youngest and more likely to be subjected to peer abuse than older, stronger students. The social 'appropriateness' of helping a bullied girl would probably be a contributing factor in high school. The fear of bullying was one of the main concerns expressed by children before entering high school (West & Varlaam, 1991). This finding has strong implications for the dynamics of transition from primary to secondary school.

Another observation was the increased victim helping behaviour by Year 12 males, and the decrease of helping by Year 12 females. Males, more than females in this year group were more likely to help. The gender of the victim, as in this case, may have a strong influence of students' behaviour. This is reflected in the qualitative component to the study. While fifteen Year 12 males reported helping a girl being bullied because she needed help, and it was the 'chivalrous' thing to do, the only responses given by Year 12 girls were negative. Ten girls deemed the victim didn't deserve help and it was none of their business.

Future investigations are necessary to explore the detailed patterns of children's helping behaviour between Years 3 and 7, Years 7 and 8, and Years 8 and 12.

Conclusions

The present study attempted to extend the research on schoolchildren's helping behaviour toward victims of bullying. While the hypothesis on schoolchildren's

helping behaviour is not supported, the results provide directions for future investigations. The results from this study suggest a marked difference between helping behaviour of primary and secondary students. This is particularly evident between Year 7 and Year 8 students. Why both males and females decrease helping a victim of bullying over the space of a few months needs to be further explored.

The outcomes of the present study represent the tentative beginnings of investigation into the dynamics of bullying in rural areas. A larger, more representative sample of rural children is needed for comparisons between rural and urban centres in terms of attitudes toward victims of bullying, and peer relations. This may extend to differences between schools in geographically linked locations. Findings of this kind, would indicate the appropriateness or inappropriateness of universal intervention strategies.

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GENERAL INFORMATION
(Junior Version)

Dear Student,

I am at your school today to do some of my University work. I would like to find out about bullying in schools. I am happy you have agreed to help me.

You are an important person for my work. I would like you to complete three worksheets. These worksheets have questions on them. I would like you to answer each question by circling one of the answers given under each question.

Remember, there are no right or wrong answers. The way *you* feel is the best answer. Also remember, you do not have to complete the whole worksheet if you do not want to. It is up to you.

You do not need to write your name. No one will ever know which worksheet you filled out. All I want is your age, your grade, and if you are a boy or a girl.

You can ask me questions at any time you wish, just raise your hand.

Thank you for helping me today.

Yours sincerely,

Kathy Elliott
Department of Psychology
Edith Cowan University

School Code:

<u>STUDENT DETAILS</u>

Please fill in: **Are you a boy or a girl**   _____

                   Your age   _____

                   Your grade   _____

****

THE PEER RELATIONS QUESTIONNAIRE FOR CHILDREN

Please show how often the following sentences are true of you. To do this, circle one of the answers underneath each sentence. First, let's do an example together on the board.

EXAMPLE: I like to play sport.

Never   Once in a while   Pretty often   Very often

1.   I get called names by others

Never   Once in a while   Pretty often   Very often

2.   I like to make friends

Never   Once in a while   Pretty often   Very often

3.   I get picked on by others

Never   Once in a while   Pretty often   Very often

4.   I am part of a group that goes round teasing others

Never   Once in a while   Pretty often   Very often

5.   Others say nasty things about me

Never   Once in a while   Pretty often   Very often

6.   I like to help people who are being picked on

Never   Once in a while   Pretty often   Very often

7.   I like to make others scared of me

Never   Once in a while   Pretty often   Very often

8.   Others leave me out of things on purpose

Never   Once in a while   Pretty often   Very often

9.   I like to show others that I'm the boss

Never   Once in a while   Pretty often   Very often

10.   I share things with others

Never   Once in a while   Pretty often   Very often

11.   I enjoy upsetting wimps

Never   Once in a while   Pretty often   Very often

12.   I like to get into a fight with someone I can easily beat

Never   Once in a while   Pretty often   Very often

13.   Others make fun of me

Never   Once in a while   Pretty often   Very often

14.   I get hit and pushed around by others

Never   Once in a while   Pretty often   Very often

15.   I enjoy helping others

Never   Once in a while   Pretty often   Very often

Well done! Any questions? Sit quietly while we wait for everyone to finish, and then we will go on with the next worksheet.

VICTIM SCALE

In this worksheet, I would like you to once again put a circle around the answer *you* think is the best. Let's do one more example on the board together.

EXAMPLE: Kids should pick up rubbish at school.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

1.   I wouldn't be friends with kids who let themselves be pushed around.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

2.   Kids who are weak are just asking for trouble.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

3.   Nobody likes a wimp.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

4.   It makes me angry when a kid is picked on without reason.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

5.   Kids should not complain about being bullied.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

6.   Soft kids make me sick.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

7.   It's okay to call some kids nasty names.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

8.   It is funny to see kids get upset when they are teased.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

9.   I like it when someone stands up for kids who are being bullied.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

10.   A bully is really a coward.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

11.   Kids who get picked on a lot usually deserve it.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

12.   It's a good thing to help children who can't defend themselves.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

WOW!!!

You are the best!

You are doing really well - nearly finished! Have you any questions?

THE VICTIM QUESTIONNAIRE
(Junior Version)

What I want you to do now, is to think back to the last few times you may have seen a kid bullied at school. (Remember, bullying can mean, hitting, punching, teasing, not letting someone play, or saying nasty things about someone). Often, bullied kids are upset. They do not know how to make the bully stop. Think about what you did at the time to either help the kid or not. (Remember, helping can mean telling the bully to stop, taking the kid being bullied away to a safe place, or telling an adult).

I would like you to circle your answer to the next sentences. These sentences ask about *who* the bullied kid was and what you did to help this kid or not. I would like you to answer *what* you did at the time, *not* what you think you should have done. Please give a reason for what you did at the time, if you wish. If you are not sure of anything, please raise your hand and I will help you. OK?

1.   Have you ever seen any of your friends bullied?   Yes   No
(if you said no, go to question 2).

When the kid being bullied was a friend, did you help your friend?

Never   Hardly ever   Most times   Always

Reason_____

2. Have you ever seen older kids being bullied?   Yes   No (if you said no, go to question 3).

When the kid being bullied was older than you, did you help that kid?

Never   Hardly ever   Most times   Always

Reason_____

3. Have you ever seen girls bullied?   Yes   No (if you said no, go to question 4).

When the kid being bullied was a girl, did you help her?

Never   Hardly ever   Most times   Always

Reason_____

4. Have you ever seen kids you did not like being bullied?   Yes   No (if you said no, go to question 5).

When the kid being bullied was someone you didn't like, did you help that kid?

Never   Hardly ever   Most times   Always

Reason_____

5. Have you ever seen kids who were 'different' to other kids bullied?   Yes   No (if you said no, go to question 6).

When the kid being bullied was 'different' to other kids, did you help that kid?

Never   Hardly ever   Most times   Always

Reason_____

6. Have you ever seen younger kids being bullied?   Yes   No (if you said no, go to question 7).

When the child being bullied was younger than you, did you help that child?

Never   Hardly ever   Most times   Always

Reason_____

7. Have you ever seen any boys bullied?   Yes   No (if you said no, go to question 8).

When the kid being bullied was a boy, did you help him?

Never   Hardly ever   Most times   Always

Reason_____

8. Have you ever seen children being bullied who had no friends?

When the kid being bullied had no friends, did you help that kid?

Never   Hardly ever   Most times   Always

Reason_____

If you want to say something more about bullying, I would be pleased if you shared it with me. Please write what you think on the lines below.

_____

_____

_____

Please check you have circled an answer for each question on all three worksheets. Thank you for your helping me today. You have been excellent!

Kathy Elliott

Senior Version Booklet   ·   Appendix A-2

GENERAL INFORMATION
(Senior Version)

Dear Student,

This study is being conducted as part of my studies in Psychology at Edith Cowan University.   I am interested in finding out about students' attitudes and behaviour toward victims of bullying in schools, and I am grateful for your help.

As an important participant in this study, I would like you to complete the attached questionnaires. Remember, you have the choice to participate in this survey or not. It is completely voluntary. If you agree to participate, I would like you to answer how *you* would answer. *Your* responses are the important ones. Please make sure all statements are answered by circling one response category. If you wish, you can choose to stop filling in the questionnaire at any time, or even decide to complete only part of the survey.

The information I get from you will be treated in the strictest confidence, and will remain anonymous. That means, *no one* will know how you have answered, or who has filled out any of the questionnaires. There is no need to write down your name, just your age, school year, and gender (whether you are a boy or a girl).

Please feel free to ask any questions you may be unclear about at any time. Thank you for your participation.

Yours sincerely,

Kathy Elliott
Department of Psychology
Edith Cowan University

School Code:

STUDENT DETAILS

Please fill in: Your gender   _____

                   Your age   _____

                   Your school year   _____

****

THE PEER RELATIONS QUESTIONNAIRE FOR CHILDREN

Please show how often the following statements are true of you. To do this, circle one of the answers underneath each statement.

1.   I get called names by others

Never   Once in a while   Pretty often   Very often

2.   I like to make friends

Never   Once in a while   Pretty often   Very often

3.   I get picked on by others

Never   Once in a while   Pretty often   Very often

4.   I am part of a group that goes round teasing others

Never   Once in a while   Pretty often   Very often

5.   Others spread nasty rumours about me

Never   Once in a while   Pretty often   Very often

6.   I like to help people who are being harassed

Never   Once in a while   Pretty often   Very often

7.   I like to make others scared of me

Never   Once in a while   Pretty often   Very often

8.   Others leave me out of things on purpose

Never   Once in a while   Pretty often   Very often

9.   I like to show others that I'm the boss

Never   Once in a while   Pretty often   Very often

10.   I share things with others

Never   Once in a while   Pretty often   Very often

11.   I enjoy upsetting wimps

Never   Once in a while   Pretty often   Very often

12.   I like to get into a fight with someone I can easily beat

Never   Once in a while   Pretty often   Very often

13.   Others make fun of me

Never   Once in a while   Pretty often   Very often

14.   I get hit and pushed around by others

Never   Once in a while   Pretty often   Very often

15.   I enjoy helping others

Never   Once in a while   Pretty often   Very often

Any questions? If not, please go on with the next questionnaire.
© Ken Rigby & Philip Slee, 1994

VICTIM SCALE - Please circle your answer to these statements.

1. I wouldn't be friends with kids who let themselves be pushed around.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

2. Kids who are weak are just asking for trouble.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

3. Nobody likes a wimp.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

4. It makes me angry when a kid is picked on without reason.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

5. Kids should not complain about being bullied.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

6. Soft kids make me sick.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

7. It's okay to call some kids nasty names.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

8. It is funny to see kids get upset when they are teased.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

9. I like it when someone stands up for kids who are being bullied.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

10. A bully is really a coward.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

11. Kids who get picked on a lot usually deserve it.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

12. It's a good thing to help children who can't defend themselves.

Strongly agree   Agree   Unsure   Disagree   Strongly disagree

You are doing well - nearly finished! Any questions? If not, go on with the last questionnaire © Ken Rigby & Philip Slee, 1991

THE VICTIM QUESTIONNAIRE
(Senior version)

Think back to the last few times you may have seen a student bullied at school. (Remember, bullying can include actions such as, hitting, punching, teasing, leaving someone out of a game or group, or saying nasty things about someone). Often bullied kids are upset as they do not know how to make the bullying stop. Think about what you did at the time to either help this kid or not. (Remember, helping can mean telling the bully to stop, taking the bullied kid away to a safe place, or telling an adult).

Please circle your answer to the following statements. These statements ask about *who* the bullied kid was and what you did at the time. I would like you to answer *what* you did at the time, *not* what you think you should have done. Please give a reason/s for the action you took, if you wish.

1. Have you seen any of your friends bullied?   Yes   No (if no, go to question 2)

When the kid being bullied was a friend, did you help your friend?

Never   Hardly ever   Most times   Always

Reason

_____

2. Have you seen older kids being bullied?   Yes   No (if no, go to question 3).

When the student being bullied was older than you, did you help that student?

Never   Hardly ever   Most times   Always

Reason

_____

3. Have you seen girls being bullied?   Yes   No (if no, go to question 4).

When the kid being bullied was a girl, did you help her?

Never   Hardly ever   Most times   Always

Reason

_____

4. Have you seen any students you didn't like being bullied?   Yes   No (if no, go to question 5).

When the kid being bullied was someone you didn't like, did you help that disliked kid?

Never   Hardly ever   Most times   Always

Reason

_____

5. Have you seen students who were 'different' to most other students being bullied? Yes   No (if no, go to question 6)

When the student being bullied was 'different' to other kids, did you help that student?

Never   Hardly ever   Most times   Always

Reason

_____

6. Have you seen younger children bullied?   Yes   No (if no, go to question 7).

When the child being bullied was younger than you, did you help that child?

Never   Hardly ever   Most times   Always

Reason

_____

7. Have you seen boys being bullied?   Yes   No (if no, go to question 8)

When the student being bullied was a boy, did you help him?

Never   Hardly ever   Most times   Always

Reason

_____

8. Have you seen kids with no friends being bullied?   Yes   No

When the kid being bullied was friendless, did you help that kid?

Never   Hardly ever   Most times   Always

Reason

_____

Should you have any comments, I would be pleased if you shared them with me. Please write them on the space provided below.

_____

_____

_____

Could you please check that you have circled an answer to all statements on the three questionnaires. I thank you for your participation.

Kathy Elliott.

The Victim Questionnaire Pre-pilot'   Appendix B

Please answer 'yes' or 'no' to the following questions:

1. The last time I saw a kid bullied, I helped the kid.
   YES   NO

2. The last time I saw a girl bullied, I helped her.
   YES   NO

3. The last time I saw a boy bullied, I helped him.
   YES   NO

4. The last time I saw a kid of a different race bullied, I helped the kid.
   YES   NO

5. The last time I saw a kid with a physical disability being bullied, I helped the kid.
   YES   NO

6. The last time I saw a kid with an intellectual disability bullied, I helped the kid.
   YES   NO

7. The last time I saw a smart kid bullied, I helped the kid.
   YES   NO

8. The last time I saw a 'dumb' kid bullied, I helped the kid.
   YES   NO

9. The last time I saw a kid my age bullied, I helped the kid.
   YES   NO

10. The last time I saw a kid younger than me bullied, I helped the kid.
    YES   NO

11. The last time I saw a kid older than me bullied, I helped the kid.
    YES   NO

12. The last time I saw a kid from my neighbourhood bullied, I helped the kid.
    YES   NO

13. The last time I saw a kid from my school bullied, I helped the kid.
    YES   NO

14. The last time I saw a kid from my class bullied, I helped the kid.
    YES   NO

15. The last time I saw a small kid bullied, I helped the kid.
    YES   NO

16.The last time I saw a big kid bullied, I helped the kid.
YES   NO

17.The last time I saw a kid the same size as me bullied, I helped the kid.
YES   NO

18.The last time I saw a good looking kid bullied, I helped the kid.
YES   NO

19.The last time I saw an ugly kid bullied, I helped the kid.
YES   NO

20.The last time I saw a fat kid bullied, I helped the kid.
YES   NO

21.The last time I saw a kid with a deformity bullied, I helped the kid.
YES   NO

22.The last time I saw a strong kid bullied, I helped the kid.
YES   NO

23.The last time I saw a weak kid bullied, I helped the kid.
YES   NO

24.The last time I saw a 'wussy' kid bullied, I helped the kid.
YES   NO

25.The last time I saw a popular kid bullied, I helped the kid.
YES   NO

26.The last time I saw an unpopular kid bullied, I helped the kid.
YES   NO

27.The last time I saw a kid I liked bullied, I helped the kid.
YES   NO

28.The last time I saw a kid I didn't like bullied, I helped the kid.
YES   NO

29. The next time I see a kid bullied, I would help the kid.
YES   NO

Explain in what circumstances this would apply to you? That is, what is the reason
or reasons why you would help some kids more than other kids. If I haven't included
anything you may have thought of in the above questions, I would be happy if you
shared them with me.

Thank you for your participation.

Victim Questionnaire   AppendixC-1
Reliability Analysis (pilot study)

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

VICTIM QUESTIIONNAIRE (PILOT)

1.   BOY
2.   CLASS
3.   DIFFRENT
4.   DONTLIKE
5.   FRIEND
6.   GIRL
7.   NOFRENDS
8.   OLDER
9.   YOUNGER

Correlation Matrix

	BOY	CLASS	DIFFRENT	DONTLIKE	FRIEND
BOY	1.0000				
CLASS	.6538	1.0000			
DIFFRENT	.3507	.5128	1.0000		
DONTLIKE	.4573	.5255	.3919	1.0000	
FRIEND	.2399	.5385	.2909	.2831	1.0000
GIRL	.2406	.5429	.6059	.3394	.4969
NOFRENDS	.4649	.5059	.3305	.5526	.5658
OLDER	.3343	.5407	.2862	.2529	.2443
YOUNGER	.4096	.5150	.5790	.3245	.4958

	GIRL	NOFRENDS	OLDER	YOUNGER
GIRL	1.0000			
NOFRENDS	.4546	1.0000		
OLDER	.5296	.2334	1.0000	
YOUNGER	.6264	.5463	.2992	1.0000

N of Cases =   70.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	25.1000	40.4971	6.3637	9

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BOY	22.2571	33.7590	.5342	.4164	.8605
CLASS	22.2429	32.4764	.7296	.5947	.8449
DIFFRENT	22.2857	30.5839	.7094	.6210	.8438
DONTLIKE	23.0000	32.4058	.5640	.3738	.8584
FRIEND	21.7571	34.3025	.5237	.3400	.8613
GIRL	22.3143	31.1752	.6391	.5569	.8512
NOFRENDS	22.2143	31.5331	.6199	.5326	.8531
OLDER	23.0286	33.4484	.4622	.3291	.8684
YOUNGER	21.7000	33.0246	.6999	.5429	.8479

Reliability Coefficients   9 items

Alpha = .86866   Standardized item alpha =   .8725

Victim Questionnaire (pilot)   Appendix C-2
Factor Analysis

VICTIM QUESTIONNAIRE (PILOT)

Analysis number 1   Listwise deletion of cases with missing values

Correlation Matrix:

```
              BOY      CLASS   DIFFRENT  DONTLIKE   FRIEND      GIRL   NOFRF

BOY        1.00000
CLASS       .55376   1.00000
DIFFRENT    .43001    .51201  1.(  .000
DONTLIKE    .45763    .52329   .39192   1.00000
FRIEND      .23992    .45946   .43678    .28306   1.00000
GIRL        .24056    .54254   .60594    .33945    .49695   1.00000
NOFRENDS    .41193    .41652   .70153    .37262    .36580    .45456   1.00
OLDER       .33426    .54183   .28620    .43578    .24430    .32957    .23
YOUNGER     .40965    .51332   .57901    .43451    .49585    .62641    .54
```

```
             OLDER    YOUNGER

OLDER      1.00000
YOUNGER     .29919   1.00000
```

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .86345

Bartlett Test of Sphericity = 261.38392, Significance =   .00000

Extraction   1 for analysis   1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
BOY	1.00000	*	1	4.50581	50.1	50.1
CLASS	1.00000	*	2	1.11041	12.3	62.4
DIFFRENT	1.00000	*	3	.83566	9.3	71.7
DONTLIKE	1.00000	*	4	.60402	6.7	78.4
FRIEND	1.00000	*	5	.53760	6.0	84.4
GIRL	1.00000	*	6	.48105	5.3	89.7
NOFRENDS	1.00000	*	7	.39041	4.3	94.1

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
OLDER	1.00000	*	8	.29038	3.2	97.3
YOUNGER	1.00000	*	9	.24466	2.7	100.0

PC   extracted   2 factors.

Factor Matrix:

```
              Factor  1     Factor  2

CLASS          .79928
DIFFRENT       .79480
```

```
YOUNGER        .78601
GIRL           .74408        -.31956
NOFRENDS       .72037
DONTLIKE       .65739        .41580
BOY            .63362        .38209
FRIEND         .63101       -.30172
OLDER          .55950        .55182
```

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
		*				
BOY	.54747	*	1	4.50581	50.1	50.1
CLASS	.71515	*	2	1.11041	12.3	62.4
DIFFRENT	.71517	*				
DONTLIKE	.60505	*				
FRIEND	.48921	*				
GIRL	.65578	*				
NOFRENDS	.59743	*				
OLDER	.61754	*				
YOUNGER	.67341	*				

VARIMAX   rotation   1 for extraction   1 in analysis   1 - Kaiser Normalization.

VARIMAX converged in 3 iterations.

Rotated Factor Matrix:

```
               Factor  1      Factor  2

DIFFRENT        .80187
GIRL            .78127
YOUNGER         .76195         .30471
NOFRENDS        .73820
FRIEND          .68167

OLDER                          .78015
DONTLIKE                       .73463
CLASS           .45361         .71371
BOY                            .69345
```

Factor Transformation Matrix:

```
               Factor  1      Factor  2

Factor  1       .78264         .62247
Factor  2      -.62247         .78264
```

Victim Questionnaire (pilot)   Appendix C-3

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *

```
        70 cases accepted.
         0 cases rejected because of out-of-range factor values.
        19 cases rejected because of missing data.
         8 non-empty cells.

         1 design will be processed.
```

- -

Univariate Homogeneity of Variance Tests

Variable .. AHELPING

```
        Cochrans C(8,8) =                        .26844, P =  .147 (approx.
        Bartlett-Box F(7,1172) =               1.38177, P =  .209
```

- -

Combined Observed Means for GENDER
Variable .. AHELPING
```
        GENDER
        female      WGT.      2.83502
                    UNWGT.    2.85048
          male      WGT.      2.74775
                    UNWGT.    2.69689
```

- -

Combined Observed Means for YEAR
Variable .. AHELPING
```
        YEAR
        year3       WGT.      3.12963
                    UNWGT.    3.14583
        year7       WGT.      2.96465
                    UNWGT.    2.96465
        year8       WGT.      2.46970
                    UNWGT.    2.46574
        year12      WGT.      2.41667
                    UNWGT.    2.51852   .
```

- -

Combined Observed Means for GENDER BY YEAR
Variable .. AHELPING
```
                    GENDER      female        male
        YEAR
        year3       WGT.      3.29167      3.00000
                    UNWGT.    3.29167      3.00000
        year7       WGT.      2.87879      3.05051
                    UNWGT.    2.87879      3.05051
        year8       WGT.      2.50926      2.42222
                    UNWGT.    2.50926      2.42222
        year12      WGT.      2.72222      2.31481
                    UNWGT.    2.72222      2.31481
```

- -

Tests of Significance for AHELPING using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	27.55	62	.44		
GENDER	.30	1	.30	.68	.414
YEAR	5.63	3	1.88	4.22	.009
GENDER BY YEAR	.71	3	.24	.53	.662
(Model)	6.95	7	.99	2.23	.043
(Total)	34.50	69	.50		

R-Squared =   .201
Adjusted R-: iared = .111

PILOT - VICTIM QUESTIONNAIRE

- - - - - O N E W A Y - - - - -

Variable   AHELPING
By Variable YEAR   year

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	6.1193	2.0398	4.7439	.0047
Within Groups	66	28.3782	.4300		
Total	69	34.4975			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
year3	18	3.1296	.6277	.1479	2.8175	TO	3.4418
year7	22	2.9646	.5953	.1269	2.7007	TO	3.2286
year8	22	2.4697	.6762	.1442	2.1699	TO	2.7695
year12	8	2.4167	.8138	.2877	1.7363	TO	3.0970
Total	70	2.7889	.7071	.0845	2.6203	TO	2.9575

GROUP	MINIMUM	MAXIMUM
year3	2.0000	4.0000
year7	1.8889	4.0000
year8	1.1111	3.6667
year12	1.0000	3.3333
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
.3898	3	66	.761

Variable   AHELPING
By Variable YEAR   year

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
  MEAN(J)-MEAN(I) >= .4637 * RANGE * SQRT(1/N(I) + 1/N(J))
  with the following value(s) for RANGE: 3.73

(*) Indicates significant differences which are shown in the lower triangle

```
                    y
                    e y y y
                    a e e e
                    r a a a
                    1 r r r
                    2 8 7 3
  Mean      YEAR

  2.4167    year12
  2.4697    year8
  2.9646    year7
  3.1296    year3          *
```

PILOT STUDY - VICT. QUES. SHAPIRO WILKES TEST OF NORMALITY

GENDER: 1.00   YEAR: 1.00

AHELPING

Valid cases: 7.0   Missing cases: 2.0   Percent missing: 2

	Statistic	df	Significance
Shapiro-Wilks	.8814	7	.2930
K-S (Lilliefors)	.2063	7	> .2000

GENDER: 1.00   YEAR: 2.00

AHELPING

Valid cases: 11.0   Missing cases: 5.0   Percent missing: 3

	Statistic	df	Significance
Shapiro-Wilks	.9719	11	.8872
K-S (Lilliefors)	.1424	11	> .2000

GENDER: 1.00   YEAR: 3.00

AHELPING

Valid cases: 12.0   Missing cases: 3.0   Percent missing: 2

	Statistic	df	Significance
Shapiro-Wilks	.9607	12	.7363
K-S (Lilliefors)	.0948	12	> .2000

GENDER: 1.00   YEAR: 4.00

AHELPING

Valid cases: 2.0   Missing cases: 2.0   Percent missing: 5

	Statistic	df	Significance
K-S (Lilliefors)	.2602	2	.

GENDER: 2.00   YEAR: 1.00

AHELPING

Valid cases: 10.0   Missing cases: .0   Percent missing:

	Statistic	df	Significance
Shapiro-Wilks	.9198	10	.3946
K-S (Lilliefors)	.1519	10	> .2000

GENDER: 2.00   YEAR: 2.00

AHELPING

Valid cases: 11.0   Missing cases: 3.0   Percent missing: 2

	Statistic	df	Significance
Shapiro-Wilks	.8925	11	.2029

K-S (Lilliefors)   .2107   11   .1865

GENDER: 2.00   YEAR: 3.00

AHELPING

Valid cases: 10.0   Missing cases: .0   Percent missing: .0

                                Statistic   df   Significance

Shapiro-Wilks   .9573   10   .7269
K-S (Lilliefors)   .1811   10   > .2000

GENDER: 2.00   YEAR: 4.00

AHELPING

Valid cases: 6.0   Missing cases: 4.0   Percent missing: 40.0

                                Statistic   df   Significance

Shapiro-Wilks   .8815   6   .3198
K-S (Lilliefors)   .1861   6   > .2000

Victim Questionnaire (pilot)   · Appendix C-4

Reasons given for helping or not helping victims of bullying by year (Pilot)

Variable	Year 3	Year 7	Year 8	Year 12
Friend:				
Helped because:				
felt sorry, victim was being hurt	2	8		2
victim was friend	10	14	13	3
Didn't help because:				
none of my business				**2**
Class:				
Helped because:				
victim was friend	3	8	5	
bullying is unfair			8	2
Didn't help because:				
didn't like victim		2	2	
fear of retalliation			2	
none of my business			2	3
Didn't like:				
Helped because:				
victim was getting hurt	2	9	4	
Didn't help because:				
victim deserved it	4	5	8	3
disliked victim		11	2	
none of my business			2	4
'good to see them bashed'			2	
Older kid:		·		
Helped because:				
wanted to help	4	2		
Didn't help because:				
fear of retalliation	2	8	8	3
older kids are self-sufficient	4	7	9	4
'socially unacceptable'		3	2	
Younger kid:				
Helped because:				
wanted to protect	11	20	14	9
Didn't help:				
none of my business				2

Reasons given for helping or not helping victims of bullying by year (pilot) - continued

Variable	Year 3	Year 7	Year 8	Year 12
Girl:				
Helped because:				
girls not as strong as boys	3		2	
because same gender	3	3		
wanted to help	2	8	2	2
Didn't help because:				
don't like girls		3		
'socially inappropriate'			3	
none of my business				2
Boy:				
Helped because:				
felt sorry/wanted to help	5	5	6	
Didn't help because:				
'socially inappropriate'		7	2	2
boys are self sufficient		4	2	
none of my business		2		2
'Different':				
Helped because:				
victim needed help/unfair	6	12	11	2
Didn't help because:				
didn't care		2	2	2
not 'cool' to help		3		
No friends:				
Helped because:		•		
wanted to help/support	10	16	6	
no one deserves bullying		2	2	2
Didn't help because:				
victim deserved it			2	
none of my business				2

Letter to principal   · Appendix D-1

Kathy Elliott
Edith Cowan University
Psychology Department
Robertson Drive
Bunbury 6230

4th July 1996

(Principal's name)
Principal
(school)

Dear *(principal's name)*

Please find attached copies of questionnaires I intend to use for my study on bullying as discussed on the phone today. The purpose of my study is to examine children's attitudes and behaviours toward victims of bullying. The issue of bullying has only received systematic attention in the last few years, and has mainly been focused in urban areas. I am interested in investigating the dynamics of bullying in an Australian rural setting. Thus, my request to you for permission for access to some of your students to make up part of my sample.

The Pro-victim Scale and the Peer Relations Questionnaire are validated questionnaires which have been used to assess children's attitudes toward victims of bullying, and how children generally relate to each other. The Victim Relations Questionnaire is a self-developed questionnaire which will attempt to gauge whether certain victim characteristics influence a child to actively help a victim of bullying or not. This questionnaire was only piloted earlier this week and has not been fully analysed. Please be aware that depending on the results, there may be modifications to this particular questionnaire for the study proper.

As the questionnaires are anonymous, I do not require the children's names, all I need are their ages and gender. Confidentiality is also assured. If your permission is granted, I will be requesting consent from parents and children from my target groups of children from Years 3 and 7/Years 8 and 12 from your school.

Should you need any further information, please ring my supervisor, Associate Professor Steve Baldwin on 807754, or myself on 807815 or at home on ▮▮▮▮▮ I would be happy to meet with you during the school holidays or early in third term to discuss in more detail the possible inclusion of some of your students in my study.

Thank you.

Yours sincerely,

Kathy Elliott
Psychology Honours Stream

Consent forms   Appendix D-2

CONSENT FORM

Dear Parent or Guardian,

I am conducting a study at your child's school as part of my Psychology Honours degree at Edith Cowan University. The purpose of the study is to assess schoolchildren's attitudes and behaviours toward victims of bullying. Anonymous questionnaires will be used to gather information and will be conducted at school during school hours. It is anticipated the information obtained from this research will be of value in the implementing of anti-bullying strategies. I would be grateful for your consent in allowing your child to participate.

As a participant in this study, your child's participation is completely voluntary. You may like to clarify with him/her, they are free to withdraw from participation in the survey at any stage. The information obtained from your child will be treated in the strictest confidence, and will remain anonymous. I do not require names, just record of his/her age and gender.

Should you have any queries regarding this project, please feel free to contact me, or my University supervisor at the address below.

Yours sincerely,

Kathy Elliott
Phone no: ████

Supervisor: Associate Professor Steve Baldwin
Department of Psychology
Edith Cowan University   '
Phone no: 807754

I give my permission for my son/daughter _____
to participate in the study on bullying to be administered by Kathy Elliott at my child's school. I understand my child will not be identified and that he/she is free to withdraw from the study at any time. I also understand results obtained from my child will be treated with the strictest confidence and used for research purposes only.

I do not give my permission for my son/daughter_____
to participate in the study on bullying to be administered by Kathy Elliott at my child's school.

Parent/guardian signature _____

            Date _____

Please return this form to your child's classroom teacher by Tuesday 2/8/96. Thank you.

CONSENT FORM

(Senior Version)

Dear Student,

I am conducting a study at your school as part of my studies in Psychology at Edith Cowan University. I am interested in finding out about bullying attitudes and behaviour in schools, and I would be grateful for your help.

As a potential participant in this study, I would like you to complete three questionnaires. You have the choice to participate in this survey or not. It is completely voluntary. If you agree to participate, I would like you to answer how **you** would answer. Your responses are the important ones. If you wish, you can choose to stop filling in the questionnaire at any time, or even decide to complete only part of the survey.

The information I get from you will be treated in the strictest confidence, and will remain anonymous. That means, no one will know how you have answered, or who has filled out any of the questionnaires. There is no need to write down your name, just your age, school year, and whether you are a boy or a girl.

Should you have any questions regarding this project, tell Mum, Dad or an adult you live with, and they can contact me or my University supervisor.

Yours sincerely,

Kathy Elliott
Department of Psychology
Edith Cowan University

Please tick:

   Yes, I agree to participate in Kathy Elliott's bullying study. I understand I can stop filling in the questionnaire at any time if I so wish. I know I will not be identified and the information I give will be kept confidential.

   No, I do not agree to participate in Kathy Elliott's bullying study.

Signature_____

     Date_____

Please return this form to your class teacher by Thursday 2/8/96. Thank you.

CONSENT FORM

(Junior Version)

Dear Student,

I am a student at Edith Cowan University and I am writing to ask for your help. For part of my University work, I would like to find out about bullying in schools. I will be visiting your school soon, and I would be happy if you can help me.

If you choose to help me, I would like you to answer some questions on a form. There are no right or wrong answers. The way you feel is the best answer. You do not have to complete the whole form if you do not want to. It is up to you.

You do not have to put your name on the form. No one will ever know which form you filled out. All I need is your age and if you are a boy or a girl.

If you want to find out more of what this is all about, tell Mum, Dad, or an adult you live with. They can ring me or my University teacher.

Thank you.

Kathy Elliott
Department of Psychology
Edith Cowan University

Please tick: '

   Yes, I agree to help Kathy Elliott in her university work on bullying in schools. I know I have the choice of filling in the whole form or only part of it. It is up to me. I also know no one will ever find out which form I filled out.

   No, I do not agree to help Kathy Elliott in her university work on bullying in schools.

Signature _____

   Date _____

Please return this form to your class teacher by 2/8/96. Thank you.

Shapiro-Wilks for all questionnaires   Appendix E

PEER RELATIONS QUESTIONNAIRE - SHAPIRO WILKES TEST OF NORMALITY

GENDER: 1.00   YEAR: 1.00

ATOTAL

Valid cases: 15.0   Missing cases: 1.0   Percent missing: 6.3

	Statistic	df	Significance
Shapiro-Wilks	.9452	15	.4605
K-S (Lilliefors)	.1409	15	> .2000

GENDER: 1.00   YEAR: 2.00

ATOTAL

Valid cases: 18.0   Missing cases: .0   Percent missing: .0

	Statistic	df	Significance
Shapiro-Wilks	.9579	18	.5353
K-S (Lilliefors)	.1439	18	> .2000

GENDER: 1.00   YEAR: 3.00

ATOTAL

Valid cases: 34.0   Missing cases: 2.0   Percent missing: 5.6

	Statistic	df	Significance
Shapiro-Wilks	.9590	34	.3466
K-S (Lilliefors)	.0857	34	> .2000

GENDER: 1.00   YEAR: 4.00

ATOTAL

Valid cases: 22.0   Missing cases: 1.0   Percent missing: 4.3

	Statistic	df	Significance
Shapiro-Wilks	.9019	22	.0357
K-S (Lilliefors)	.2394	22	.0020

GENDER: 2.00   YEAR: 1.00

ATOTAL

Valid cases: 17.0   Missing cases: 5.0   Percent missing: 22.7

	Statistic	df	Significance
Shapiro-Wilks	.8728	17	.0250
K-S (Lilliefors)	.2083	17	.0484

GENDER: 2.00   YEAR: 2.00

ATOTAL

Valid cases: 16.0   Missing cases: .0   Percent missing: .0

	Statistic	df	Significance

	Statistic	df	Significance
Shapiro-Wilks	.9403	16	.3981
K-S (Lilliefors)	.1587	16	> .2000

GENDER: 2.00   YEAR: 3.00

    ATOTAL

Valid cases: 21.0   Missing cases: .0   Percent missing: .0

	Statistic	df	Significance
Shapiro-Wilks	.8927	21	.0270
K-S (Lilliefors)	.2040	21	.0226

GENDER: 2.00   YEAR: 4.00

    ATOTAL

Valid cases: 19.0   Missing cases: 1.0   Percent missing: 5.0

	Statistic	df	Significance
Shapiro-Wilks	.8723	19	.0158
K-S (Lilliefors)	.1383	19	> .2000

PRO-VICTIM SCALE - SHAPIRO WILKES TEST OF NORMALITY

GENDER: 1.00   YEAR: 1.00

    ATOTAL

Valid cases: 13.0   Missing cases: 3.0   Percent missing: 18.8

	Statistic	df	Significance
Shapiro-Wilks	.8965	13	.1536
K-S (Lilliefors)	.1111	13	> .2000

GENDER: 1.00   YEAR: 2.00

    ATOTAL

Valid cases: 16.0   Missing cases: 2.0 ` Percent missing: 11.1

	Statistic	df	Significance
Shapiro-Wilks	.8914	16	.0616
K-S (Lilliefors)	.1872	16	.1370

GENDER: 1.00   YEAR: 3.00

    ATOTAL

Valid cases: 35.0   Missing cases: 1.0   Percent missing: 2.8

	Statistic	df	Significance
Shapiro-Wilks	.9877	35	.9668
K-S (Lilliefors)	.0907	35	> .2000

GENDER: 1.00   YEAR: 4.00

    ATOTAL

Valid cases: 22.0   Missing cases: .0   Percent missing: .0

	Statistic	df	Significance
Shapiro-Wilks	.9826	22	.9329
K-S (Lilliefors)	.1343	22	> .2000

GENDER: 2.00   YEAR: 1.00

    ATOTAL

Valid cases: 20.0   Missing cases: 2.0   Percent missing: 9.1

	Statistic	df	Significance
Shapiro-Wilks	.9843	20	.9629
K-S (Lilliefors)	.0906	20	> .2000

GENDER: 2.00   YEAR: 2.00

    ATOTAL

Valid cases: 15.0   Missing cases: 1.0   Percent missing: 6.3

	Statistic	df	Significance

```
Shapiro-Wilks              .9489        15              .4912
K-S (Lilliefors)           .1301        15         >   .2000


GENDER:     2.00    YEAR:       3.00

     ATOTAL

Valid cases:        21.0   Missing cases:        .0    Percent missing:      .0

                    Statistic        df        Significance

Shapiro-Wilks              .9863        21              .9747
K-S (Lilliefors)           .0737        21         >   .2000


GENDER:     2.00    YEAR:       4.00

     ATOTAL

Valid cases:        18.0   Missing cases:       3.0    Percent missing:     14.3

                    Statistic        df        Significance

Shapiro-Wilks              .8989        18              .0557
K-S (Lilliefors)           .1418        18         >   .2000
```

VICTIM QUESTIONNAIRE (6+ RESPONSES) SHAPIRO-WILKES TEST OF NORMALITY

GENDER: 1.00   YEAR: 1.00

    AAMEAN6

Valid cases: 9.0   Missing cases: 6.0   Percent missing: 40.0

	Statistic	df	Significance
Shapiro-Wilks	.8217	9	.0443
K-S (Lilliefors)	.1780	9	> .2000

GENDER: 1.00   YEAR: 2.00

    AAMEAN6

Valid cases: 7.0   Missing cases: 12.0   Percent missing: 63.2

	Statistic	df	Significance
Shapiro-Wilks	.8387	7	.1033
K-S (Lilliefors)	.2866	7	.0852

GENDER: 1.00   YEAR: 3.00

    AAMEAN6

Valid cases: 26.0   Missing cases: 10.0   Percent missing: 27.8

	Statistic	df	Significance
Shapiro-Wilks	.9690	26	.5942
K-S (Lilliefors)	.1334	26	> .2000

GENDER: 1.00   YEAR: 4.00

    AAMEAN6

Valid cases: 15.0   Missing cases: 7.0   Percent missing: 31.8

	Statistic	df	Significance
Shapiro-Wilks	.9121	15	.1907
K-S (Lilliefors)	.1110	15	> .2000

GENDER: 2.00   YEAR: 1.00

    AAMEAN6

Valid cases: 12.0   Missing cases: 10.0   Percent missing: 45.5

	Statistic	df	Significance
Shapiro-Wilks	.9235	12	.3702
K-S (Lilliefors)	.1825	12	> .2000

GENDER: 2.00   YEAR: 2.00

    AAMEAN6

Valid cases: 10.0 Missing cases: 6.0   Percent missing: 37.5

	Statistic	df	Significance
Shapiro-Wilks	.9479	10	.6167
K-S (Lilliefors)	.1605	10	> .2000

Hi-Res Chart # 65:Boxplot of aamean6; gender: 2.00; year: 2.00

GENERER: 2.00   YEAR: 3.00

AAMEAN6

Valid cases: 13.0 Missing cases: 8.0   Percent missing: 38.1

	Statistic	df	Significance
Shapiro-Wilks	.9116	13	.2612
K-S (Lilliefors)	.1473	13	> .2000

GENDER: 2.00   YEAR: 4.00

AAMEAN6

Valid cases: 12.0 Missing cases: 9.0   Percent missing: 42.9

	Statistic	df	Significance
Shapiro-Wilks	.9618	12	.7507
K-S (Lilliefors)	.1464	12	> .2000

Reliability Analysis for all Questionnaires   Appendix F

PRO-VICTIM SCALE 5/10

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

1.	COMPLAIN	kids should not complain about being bul
2.	COWARD	a bully is really a coward
3.	DESERVIT	kids who get picked on a lot usually des
4.	FUNUPSET	funny to see kids upset when teased
5.	GOODHELP	good to help children who can't defend t
6.	NOTFREND	not friends with pushed around kids
7.	OKNASTY	ok to call some kids nasty names
8.	PICKEDON	makes me angry when a kid is picked on f
9.	SOFTKIDS	soft kids make me sick
10.	STANDUP	like it when someone stands up for bulli
11.	WEAKKIDS	weak kids ask for trouble
12.	WIMPS	nobody likes a wimp

Correlation Matrix

	COMPLAIN	COWARD	DESERVIT	FUNUPSET	GOODHELP
COMPLAIN	1.0000				
COWARD	.2138	1.0000			
DESERVIT	.2634	.1129	1.0000		
FUNUPSET	.3245	.2871	.4288	1.0000	
GOODHELP	.1678	.3518	.1562	.2655	1.0000
NOTFREND	.1234	.0186	.1741	.1180	-.0444
OKNASTY	.1247	.2899	.3386	.5669	.2180
PICKEDON	.1825	.3559	.0431	.2155	.1980
SOFTKIDS	.3617	.1830	.4037	.4794	.2719
STANDUP	.3139	.2357	.2288	.2236	.1766
WEAKKIDS	.1785	.1515	.2399	.3791	.2669
WIMPS	.2705	.0106	.3754	.3188	.1819

	NOTFREND	OKNASTY	PICKEDON	SOFTKIDS	STANDUP
NOTFREND	1.0000				
OKNASTY	.0548	1.0000			
PICKEDON	.0766	.1358	1.0000		
SOFTKIDS	.2654	.3537	.1641	1.0000	
STANDUP	.2128	.3514	.2581	.2992	1.0000
WEAKKIDS	.2069	.2750	.1355	.4372	.2731
WIMPS	.1385	.2272	.1644	.4936	.1632

	WEAKKIDS	WIMPS
WEAKKIDS	1.0000	
WIMPS	.4175	1.0000

N of Cases =   160.0

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
COMPLAIN	43.4563	43.3943	.4109	.2540	.7767
COWARD	43.6813	43.9921	.3485	.2854	.7838
DESERVIT	43.7438	43.1478	.4542	.2976	.7721
FUNUPSET	43.2438	42.1603	.6092	.4958	.7580
GOODHELP	43.3750	45.2925	.3614	.2120	.7809
NOTFREND	43.9938	46.9119	.2127	.1322	.7947
OKNASTY	43.5438	43.2182	.4772	.4209	.7700
PICKEDON	43.3375	45.2187	.3093	.2002	.7866
SOFTKIDS	43.6250	40.7138	.6273	.4531	.7535
STANDUP	43.1188	44.8600	.4485	.2868	.7739
WEAKKIDS	43.4500	42.8780	.4876	.3174	.7688
WIMPS	43.9313	42.2405	.4546	.3618	.7722

Reliability Coefficients   12 items

Alpha = .7895   Standardized item alpha =   .7913

PEER RELATIONS QUESTIONNAIRE 5/10

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

1.	EXCLUDE	left out on purpose
2.	FRIENDS	like to make friends
3.	GETFIGHT	like to fight weaker person
4.	HELPING	enjoy helping others
5.	HITNPUSH	get hit and pushed by others
6.	LIKEHELP	like to help harassed people
7.	MAKEFUN	others make fun of me
8.	NAMES	get called names by others
9.	PICKEDON	get picked on by others
10.	RUMOURS	others spread rumours about me
11.	SCAREDME	like to make others scared of me
12.	SHARING	share things with others
13.	TEASING	part of group that teases others
14.	THEBOSS	like to show I'm the boss
15.	WIMPS	enjoy upsetting wimps

Correlation Matrix

	EXCLUDE	FRIENDS	GETFIGHT	HELPING	HITNPUSH
EXCLUDE	1.0000				
FRIENDS	-.0585	1.0000			
GETFIGHT	.2397	-.1205	1.0000		
HELPING	.0702	.2369	-.1893	1.0000	
HITNPUSH	.3704	-.1158	.3514	-.0227	1.0000
LIKEHELP	.1651	.1677	-.0814	.5692	.2059
MAKEFUN	.5484	-.0912	.2333	.1623	.5168
NAMES	.4452	-.1060	.1758	-.0110	.5279
PICKEDON	.4069	-.1332	.1852	-.0388	.4572
RUMOURS	.3756	.0334	.1263	.0767	.2813
SCAREDME	.2763	-.1372	.5474	-.1996	.1686
SHARING	.1002	.2131	-.0518	.2735	-.0485
TEASING	.1753	-.0276	.3639	-.1439	.2180
THEBOSS	.2399	-.1008	.4397	-.0960	.2124
WIMPS	.2071	-.1964	.6293	-.2037	.2618

	LIKEHELP	MAKEFUN	NAMES	PICKEDON	RUMOURS
LIKEHELP	1.0000				
MAKEFUN	.1829	1.0000			
NAMES	.0105	.6049	1.0000		
PICKEDON	.0153	.5439	.6883	1.0000	
RUMOURS	.2574	.3703	.3669	.4549	1.0000
SCAREDME	-.0524	.2165	.1601	.1456	.1838
SHARING	.2617	.0656	-.0908	-.2166	-.0962
TEASING	-.0225	.2582	.2378	.0660	.1149
THEBOSS	-.0094	.1983	.1925	.2232	.1326
WIMPS	-.0901	.1807	.2021	.2020	.0784

Correlation Matrix

	SCAREDME	SHARING	TEASING	THEBOSS	WIMPS
SCAREDME	1.0000				
SHARING	-.0864	1.0000			
TEASING	.4270	.0308	1.0000		
THEBOSS	.4557	-.0360	.4794	1.0000	
WIMPS	.5984	-.1401	.5167	.5479	1.0000

N of Cases =   162.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	31.4753	32.9590	5.7410	15

Item-total Statistics

| | Scale | Scale | Corrected |

	Mean if Item Deleted	Variance. if Item Deleted	Item- Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
EXCLUDE	29.6481	27.2605	.5519	.3934	.7240
FRIENDS	28.1481	32.8847	-.0539	.1320	.7771
GETFIGHT	30.0309	28.6885	.4051	.5000	.7394
HELPING	28.3704	31.5763	.0782	.4286	.7697
HITNPUSH	29.9444	28.6863	.5235	.4593	.7311
LIKEHELP	28.6481	29.8816	.2386	.4518	.7563
MAKEFUN	29.3951	27.2591	.6251	.5622	.7188
NAMES	29.2901	27.8842	.5269	.6039	.7279
PICKEDON	29.4136	28.3186	.4749	.6039	.7330
RUMOURS	29.6358	26.5063	.4258	.3378	.7389
SCAREDME	30.0000	29.0932	.3970	.4712	.7405
SHARING	28.1914	32.3545	.0257	.2190	.7688
TEASING	29.9198	29.2047	.3839	.4227	.7417
THEBOSS	29.9383	29.1514	.4204 .	.3979	.7389
WIMPS	30.0802	29.3910	.4061	.5937	.7404

Reliability Coefficients   15 items

Alpha =   .7570   Standardized item alpha =   .7552

VICTIM QUESTIONNAIRE 5/10

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

1.	BOYS	seen boys bullied
2.	DIFFRENT	seen 'different' kids bullied
3.	DONTLIKE	seen disliked students bullied
4.	FRIENDS	seen friends bullied
5.	GIRLS	seen girls bullied
6.	NOFRENDS	seen friendless kid bullied
7.	OLDERKID	seen older kids bullied
8.	YOUNGKID	seen younger kids bullied

Correlation Matrix

	BOYS	DIFFRENT	DONTLIKE	FRIENDS	GIRLS
BOYS	1.0000				
DIFFRENT	.4518	1.0000			
DONTLIKE	.5012	.1909	1.0000		
FRIENDS	.4363	.4504	.2961	1.0000	
GIRLS	.3057	.2863	.1938	.5402	1.0000
NOFRENDS	.4968	.3771	.5410	.5007	.4124
OLDERKID	.6030	.2505	.4427	.3851	.3783
YOUNGKID	.4180	.3731	.2401	.5184	.5622

	NOFRENDS	OLDERKID	YOUNGKID
NOFRENDS	1.0000		
OLDERKID	.4567	1.0000	
YOUNGKID	.3619	.2876	1.0000

N of Cases =   43.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	22.0930	23.3721	4.8345	8

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
BOYS	19.4186	17.5349	.6745	.5427	.8033
DIFFRENT	19.3256	19.3677	.4683	.3151	.8294
DONTLIKE	19.8605	18.3134	.4946	.3913	.8282
FRIENDS	18.6977	19.6921	.6454	.4705	.8160
GIRLS	19.2093	18.4075	.5336	.4467	.8220
NOFRENDS	19.4419	17.1573	.6535	.4749	.8055
OLDERKID	19.7907	17.8837	.5796	.4444	.8160
YOUNGKID	18.9070	18.1340	.5502	.4282	.8200

Reliability Coefficients   8 items

Alpha =   .8368   Standardized item alpha =   .8433

Pro-victim Scale   `Appendix G-I
Factor Analysis

Analysis number 1   Listwise deletion of cases with missing values

Correlation Matrix:

	COMPLAIN	COWARD	DESERVIT	FUNUPSET	GOODHELP	NOTFREND	OKNASTY
COMPLAIN	1.00000						
COWARD	.21383	1.00000					
DESERVIT	.26338	.11292	1.00000				
FUNUPSET	.32452	.28706	.42876	1.00000			
GOODHELP	.16782	.35176	.15616	.26546	1.00000		
NOTFREND	.12336	.01863	.17413	.11798	-.04440	1.00000	
OKNASTY	.12468	.28986	.33864	.56686	.21804	.05476	1.00000
PICKEDON	.18252	.35594	.04306	.21553	.19800	.07664	.13579
SOFTKIDS	.36168	.18300	.40370	.47937	.27186	.26543	.35375
STANDUP	.31388	.23567	.22877	.22362	.17660	.21284	.35136
WEAKKIDS	.17847	.15149	.23994	.37907	.26693	.20691	.27500
WIMPS	.27050	.01064	.37538	.31878	.18187	.13850	.22722

	PICKEDON	SOFTKIDS	STANDUP	WEAKKIDS	WIMPS
PICKEDON	1.00000				
SOFTKIDS	.16406	1.00000			
STANDUP	.25815	.29919	1.00000		
WEAKKIDS	.13549	.43718	.27313	1.00000	
WIMPS	.16439	.49360	.16320	.41750	1.00000

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .78740

Bartlett Test of Sphericity = 435.12198, Significance =   .00000

Extraction   1 for analysis   1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
COMPLAIN	1.00000	*	1	3.78866	31.6	31.6
COWARD	1.00000	*	2	1.39946	11.7	43.2
DESERVIT	1.00000	*	3	1.09418	9.1	52.4
FUNUPSET	1.00000	*	4	.95558	8.0	60.3
GOODHELP	1.00000	*	5	.87471	7.3	67.6
NOTFREND	1.00000	*	6	.76003	6.3	73.9
OKNASTY	1.00000	*	7	.73045	6.1	80.0
PICKEDON	1.00000	*	8	.63471	5.3	85.3
SOFTKIDS	1.00000	*	9	.52979	4.4	89.7
STANDUP	1.00000	*	10	.49324	4.1	93.8
WEAKKIDS	1.00000	*	11	.42811	3.6	97.4
WIMPS	1.00000	*	12	.31107	2.6	100.0

PC   extracted   3 factors.

Factor Matrix:

	Factor 1	Factor 2	Factor 3
SOFTKIDS	.74449		
FUNUPSET	.73459		
OKNASTY	.62412		-.35537
WEAKKIDS	.61432		
DESERVIT	.59195	-.31584	
WIMPS	.59085	-.40045	
STANDUP	.54560		.39618
COMPLAIN	.52469		
GOODHELP	.46694	.40582	
COWARD	.44567	.67238	
PICKEDON	.38784	.49932	.38204

NOTFREND   -.36850   .62546

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
COMPLAIN	.35676	*	1	3.78866	31.6	31.6
COWARD	.65267	*	2	1.39946	11.7	43.2
DESERVIT	.48895	*	3	1.09418	9.1	52.4
FUNUPSET	.62749	*				
GOODHELP	.44081	*				
NOTFREND	.61529	*				
OKNASTY	.52910	*				
PICKEDON	.54569	*				
SOFTKIDS	.61989	*				
STANDUP	.47531	*				
WEAKKIDS	.41562	*				
WIMPS	.51474	*				

QUARTIMAX rotation   1 for extraction   1 in analysis   1 - Kaiser Normalizat

QUARTIMAX converged in 5 iterations.

Rotated Factor Matrix:

	Factor 1	Factor 2	Factor 3
SOFTKIDS	.75961		
FUNUPSET	.73332		
DESERVIT	.69436		
WIMPS	.69176		
WEAKKIDS	.62759		
OKNASTY	.61183		-.31391
COMPLAIN	.39972	.32465	* .30262
COWARD		.76661	
PICKEDON		.71467	
STANDUP	.34159	.48883	.34594
GOODHELP	.33919	.45347	-.34659
NOTFREND			.74606

Factor Transformation Matrix:

	Factor 1	Factor 2	Factor 3
Factor 1	.90168	.42317	.08885
Factor 2	-.35135	.83681	-.41988

	Factor 1	Factor 2	Factor 3
Factor 3	-.25203	.34738	.90322

Pro-victim Scale   `Appendix G-2
ANOVA - support victim

```
                    PRO-VICTIM SCALE - GENDER X YEAR

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
        170 cases accepted.
          0 cases rejected because of out-of-range factor values.
          3 cases rejected because of missing data.
          8 non-empty cells.

          1 design will be processed.
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Univariate Homogeneity of Variance Tests

Variable .. SUPPVICT

        Cochrans C(20,8) =                          .21962, P =  .097 (approx.
        Bartlett-Box F(7,22951) =                   1.40349, P =  .199


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Combined Observed Means for GENDER
Variable .. SUPPVICT
        GENDER
        female          WGT.      1.62271
                        UNWGT.    1.59605
          male          WGT.      1.99156
                        UNWGT.    1.97842


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Combined Observed Means for YEAR
Variable .. SUPPVICT
          YEAR
        year 3          WGT.      1.89189
                        UNWGT.    1.83532
        year 7          WGT.      1.69697
                        UNWGT.    1.69914
         year8          WGT.      1.80117
                        UNWGT.    1.83598
        year 12         WGT.      1.77519
                        UNWGT.    1.77850

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Combined Observed Means for GENDER BY YEAR
Variable .. SUPPVICT
                        GENDER      female        male
          YEAR
        year 3          WGT.      1.41667       2.25397
                        UNWGT.    1.41667       2.25397
        year 7          WGT.      1.62745       1.77083
                        UNWGT.    1.62745       1.77083
         year8          WGT.      1.70370       1.96825
                        UNWGT.    1.70370       1.96825
        year 12         WGT.      1.63636       1.92063
                        UNWGT.    1.63636       1.92063
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
Tests of Significance for SUPPVICT using UNIQUE sums of squares
Source of Variation        SS      DF       MS        F  Sig of F

WITHIN CELLS             72.78     162      .45
GENDER                    5.85       1     5.85    13.02     .000
YEAR                       .46       3      .15      .34     .794
GENDER BY YEAR            2.63       3      .88     1.95     .123

(Model)                   9.02       7     1.29     2.87     .008
(Total)                  81.79     169      .48

R-Squared =            .110
Adjusted R-Squared =   .072
```

PRQ   Appendix H-1
Factor Analysis

PRQ 5/10

- - - - - - - - - - - F A C T O R   A N A L Y S I S - - - - - - - - - - - - - -
Analysis number 1   Listwise deletion of cases with missing values

Correlation Matrix:

	EXCLUDE	FRIENDS	GETFIGHT	HELPING	HITNPUSH	LIKEHELP	MAKEFUN
EXCLUDE	1.00000						
FRIENDS	-.05849	1.00000					
GETFIGHT	.23971	-.12046	1.00000				
HELPING	.07023	.23692	-.18928	1.00000			
HITNPUSH	.37041	-.11584	.35140	-.02268	1.00000		
LIKEHELP	.16508	.16770	-.08144	.56921	.20593	1.00000	
MAKEFUN	.54838	-.09117	.23335	.16233	.51675	.18286	1.00000
NAMES	.44517	-.10602	.17584	-.01096	.52794	.01047	.60486
PICKEDON	.40694	-.13325	.18518	-.03884	.45718	.01534	.54385
RUMOURS	.37556	.03338	.12633	.07675	.28134	.25743	.37027
SCAREDME	.27634	-.13718	.54736	-.19960	.16859	-.05236	.21652
SHARING	.10022	.21315	-.05179	.27353	-.04848	.26167	.06556
TEASING	.17533	-.02756	.36387	-.14388	.21798	-.02254	.25821
THEBOSS	.23986	-.10079	.43967	-.09604	.21243	-.00938	.19831
WIMPS	.20714	-.19640	.62927	-.20373	.26176	-.09005	.18066

	NAMES	PICKEDON	RUMOURS	SCAREDME	SHARING	TEASING	THEBOSS
NAMES	1.00000						
PICKEDON	.68832	1.00000					
RUMOURS	.36694	.45493	1.00000				
SCAREDME	.16006	.14563	.18381	1.00000			
SHARING	-.09079	-.21655	-.09621	-.08635	1.00000		
TEASING	.23778	.06601	.11492	.42699	.03082	1.00000	
THEBOSS	.19252	.22318	.13258	.45572	-.03600	.47937	1.00000
WIMPS	.20210	.20205	.07844	.59836	-.14014	.51668	.54794

	WIMPS
WIMPS	1.00000

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .78926

Bartlett Test of Sphericity = 865.70508, Significance =   .00000

Extraction 1 for analysis   1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
EXCLUDE	1.00000	*	1	4.33154	28.9	28.9
FRIENDS	1.00000	*	2	2.46083	16.4	45.3
GETFIGHT	1.00000	*	3	1.69779	11.3	56.6
HELPING	1.00000	*	4	.92199	6.1	62.7
HITNPUSH	1.00000	*	5	.89234	5.9	68.7
LIKEHELP	1.00000	*	6	.75506	5.0	73.7
MAKEFUN	1.00000	*	7	.70432	4.7	78.4
NAMES	1.00000	*	8	.61505	4.1	82.5
PICKEDON	1.00000	*	9	.54168	3.6	86.1
RUMOURS	1.00000	*	10	.49391	3.3	89.4
SCAREDME	1.00000	*	11	.40488	2.7	92.1
SHARING	1.00000	*	12	.37171	2.5	94.6
TEASING	1.00000	*	13	.30229	2.0	96.6
THEBOSS	1.00000	*	14	.27490	1.8	98.5
WIMPS	1.00000	*	15	.23171	1.5	100.0

PC   extracted   3 factors.

Factor Matrix:

            Factor 1   Factor 2   Factor 3

```
MAKEFUN      .68512          .44107
NAMES        .68498          .33978      -.34002
PICKEDON     .65470          .32258      -.44583
WIMPS        .65357         -.49556
HITNPUSH     .65033
GETFIGHT     .62861         -.38690
EXCLUDE      .61923          .33502
SCAREDME     .60752         -.41260
THEBOSS      .59299         -.32156       .30986
TEASING      .54562         -.31025       .35759
RUMOURS      .48417          .39706
HELPING                      .63641       .45324
LIKEHELP                     .61213       .49827
SHARING                                   .58655
FRIENDS                                   .38787
```

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
EXCLUDE	.49694	*	1	4.33154	28.9	28.9
FRIENDS	.27358	*	2	2.46083	16.4	45.3
GETFIGHT	.59969	*	3	1.69779	11.3	56.6
HELPING	.62605	*				
HITNPUSH	.50407	*				
LIKEHELP	.62668	*				
MAKEFUN	.66766	*				
NAMES	.70027	*				
PICKEDON	.73145	*				
RUMOURS	.40149	*				
SCAREDME	.61139	*				
SHARING	.44697	*				
TEASING	.52183	*				
THEBOSS	.55106	*				
WIMPS	.73105	*				

VARIMAX   rotation   1 for extraction   1 in analysis   1 - Kaiser Normalization.

VARIMAX converged in 5 iterations.

Rotated Factor Matrix:

```
              Factor  1      Factor  2      Factor  3
                                                *
PICKEDON      .81931
NAMES         .81771
MAKEFUN       .78719
HITNPUSH      .67231
EXCLUDE       .64483
RUMOURS       .62385

WIMPS                        .82811
SCAREDME                     .76555
GETFIGHT                     .74780
THEBOSS                      .72666
TEASING                      .71345

HELPING                                     .75254
LIKEHELP                                    .75182
SHARING                                     .65740
FRIENDS                                     .49810
```

Factor Transformation Matrix:

```
              Factor  1      Factor  2      Factor  3

Factor  1     .74207          .65948        -.12011
Factor  2     .58736         -.55335         .59060
Factor  3    -.32302          .50882         .79797
```

PRQ - ANOVA   Appendix H-2

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
        169 cases accepted.
        0 cases rejected because of out-of-range factor values.
        3 cases rejected because of missing data.
        8 non-empty cells.

        1 design will be processed.
- -
Univariate Homogeneity of Variance Tests

Variable .. EXCLUDE   left out on purpose

        Cochrans C(20,8) =   .20241, P = .230 (appro
        Bartlett-Box F(7,22978) =   2.15513, P = .035
- -
Combined Observed Means for GENDER
Variable .. EXCLUDE
        GENDER
        female   WGT.   1.83516
                      UNWGT.   1.88122
          male   WGT.   1.88462
                      UNWGT.   1.87068

- -
Combined Observed Means for YEAR
Variable .. EXCLUDE
        YEAR
        year 3   WGT.   2.24324
                      UNWGT.   2.24405
        year 7   WGT.   1.76471
                      UNWGT.   1.76042
        year 8   WGT.   1.76786
                      UNWGT.   1.78571
        year 12   WGT.   1.71429
                      UNWGT.   1.71364

- -
Combined Observed Means for GENDER BY YEAR
Variable .. EXCLUDE
                      GENDER   female ,   male
        YEAR
        year 3   WGT.   2.25000   2.23810
                      UNWGT.   2.25000   2.23810
        year 7   WGT.   1.83333   1.68750
                      UNWGT.   1.83333   1.68750
        year 8   WGT.   1.71429   1.85714
                      UNWGT.   1.71429   1.85714
        year 12   WGT.   1.72727   1.70000
                      UNWGT.   1.72727   1.70000

- -
Tests of Significance for EXCLUDE using UNIQUE sums of squares
Source of Variation   SS   DF   MS   F Sig of F

WITHIN CELLS   125.02   161   .78
GENDER   .00   1   .00   .01   .940
YEAR   6.88   3   2.29   2.95   .034
GENDER BY YEAR   .46   3   .15   .20   .899

(Model)   7.57   7   1.08   1.39   .212
(Total)   132.59   168   .79

R-Squared =   .057
Adjusted R-Squared = .016

- -

- - - - - O N E W A Y - - - - -

Variable   EXCLUDE   left out on purpose

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	7.1097	2.3699	3.1162	.0277
Within Groups	165	125.4820	.7605		
Total	168	132.5917			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mc
year 3	37	2.2432	1.0905	.1793	1.8797 TO 2.6(
year 7	34	1.7647	.6060	.1039	1.5533 TO 1.97
year 8	56	1.7679	.8737	.1168	1.5339 TO 2.0(
year 12	42	1.7143	.8348	.1288	1.4541 TO 1.97
Total	169	1.8580	.8884	.0683	1.7231 TO 1.99

GROUP	MINIMUM	MAXIMUM
year 3	1.0000	4.0000
year 7	1.0000	3.0000
year 8	1.0000	4.0000
year 12	1.0000	4.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
3.4478	3	165	.018

Variable	EXCLUDE	left out on purpose
By Variable	YEAR	year

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
    MEAN(J)-MEAN(I) >= .6166 * RANGE * SQRT(1/N(I) + 1/N(J))
    with the following value(s) for RANGE: 3.67

    (*) Indicates significant differences which are shown in the lower triangle

```
                          y
                          e  y  y  y
                          a  e  e  e
                          r  a  a  a
                             r  r  r
                          1
                          2  7  8  3
        Mean      YEAR

        1.7143    year 12
        1.7647    year 7
        1.7679    year 8
        2.2432    year 3    *
```

- - - - - Kruskal-Wallis 1-Way Anova

EXCLUDE	left out on purpose
by YEAR	year

Mean Rank	Cases				
101.20	37	YEAR =	1	year 3
85.12	34	YEAR =	2	year 7
79.88	56	YEAR =	3	year 8
77.45	42	YEAR =	4	year 12

```
                169   Total
                                           Corrected for ties
    Chi-Square       D.F.  Significance   Chi-Square       D.F.  Significance
      5.6689          3        .1289        6.6542          3        .0838
```

```
* * * * * A n a    s i s  o f  V a r i a n c e * * * * * *
   170 cases    pted.
     0 cases   jected because of out-of-range factor values.
     2 cases ι  ncted because of missing data.
     8 non-empt  cells.

     1 design wi l be processed.
```
- -
Univariate Homogeneity of Variance Tests

Variable .. HITNPUSH   get hit and pushed by others

```
        Cochrans C(20,8) =                    .25881, P =   .010 (approx.)
        Bartlett-Box F(7,23239) =            3.72772, P =   .000
```
- -
Combined Observed Means for GENDER
Variable .. HITNPUSH
```
        GENDER
        female       WGT.      1.40659
                     UNWGT.    1.47413
          male       WGT.      1.78481
                     UNWGT.    1.77715
```
- -
Combined Observed Means for YEAR
Variable .. HITNPUSH
```
        YEAR
        year 3       WGT.      2.05263
                     UNWGT.    2.02841
        year 7       WGT.      1.70588
                     UNWGT.    1.71181
        year 8       WGT.      1.41071
                     UNWGT.    1.47143
        year 12      WGT.      1.28571
                     UNWGT.    1.29091
```
- -
Combined Observed Means for GENDER BY YEAR   ,
Variable .. HITNPUSH
```
        GENDER       female          male
        YEAR
        year 3       WGT.      1.87500       2.18182
                     UNWGT.    1.87500       2.18182
        year 7       WGT.      1.61111       1.81250
                     UNWGT.    1.61111       1.81250
        year 8       WGT.      1.22857       1.71429
                     UNWGT.    1.22857       1.71429
        year 12      WGT.      1.18182       1.40000
                     UNWGT.    1.18182       1.40000
```
- -
Tests of Significance for HITNPUSH using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	76.27	162	.47		
GENDER	3.69	1	3.69	7.85	.006
YEAR	12.10	3	4.03	8.56	.000
GENDER BY YEAR	.59	3	.20	.42	.741
(Model)	19.08	7	2.73	5.79	.000
(Total)	95.35	169	.56		

```
R-Squared =           .200
Adjusted R-Squared =  .166
```

- - - - - O N E W A Y - - - - -

Variable   HITNPUSH   get hit and pushed by others
By Variable YEAR   year

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	14.2685	4.7562	9.7378	.0000
Within Groups	166	81.0786	.4884		
Total	169	95.3471			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mea
year 3	38	2.0526	.9571	.1553	1.7380 TO 2.36
year 7	34	1.7059	.6755	.1159	1.4702 TO 1.94
year 8	56	1.4107	.6260	.0837	1.2431 TO 1.57
year 12	42	1.2857	.5078	.0784	1.1275 TO 1.44
Total	170	1.5824	.7511	.0576	1.4686 TO 1.69

GROUP	MINIMUM	MAXIMUM
year 3	1.0000	4.0000
year 7	.0000	3.0000
year 8	.0000	3.0000
year 12	.0000	3.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
3.5042	3	166	.017

Variable   HITNPUSH   get hit and pushed by others
By Variable YEAR   year

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
  MEAN(J)-MEAN(I) >= .4942 * RANGE * SQRT(1/N(I) + 1/N(J))
  with the following value(s) for RANGE: 3.67

(*) Indicates significant differences which are shown in the lower triangle

```
                    y
                    e y y y
                    a e e e
                    r a a a
                      r r r
                    1
                    2 8 7 3
Mean       YEAR

1.2857     year 12
1.4107     year 8
1.7059     year 7      *
2.0526     year 3      * *
```

- - - - - Kruskal-Wallis 1-Way Anova

HITNPUSH   get hit and pushed by others
 by YEAR   year

Mean Rank	Cases				
109.63	38	YEAR =	1	year 3
96.15	34	YEAR =	2	year 7

```
        75.69      56   YEAR =    3   year 8
        68.13      42   YEAR =  . 4   year 12

                   ---
                   170   Total
```

```
                                       Corrected for ties
Chi-Square        D.F.  Significance   Chi-Square      D.F.  Significance
18.1819            3       .0004        22.9403          3       .0000
```

```
* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
      170 cases accepted.
        0 cases rejected because of out-of-range factor values.
        2 cases rejected because of missing data.
        8 non-empty cells.

        1 design will be processed.
```
- -
Univariate Homogeneity of Variance Tests

Variable .. MAKEFUN   others make fun of me

```
        Cochrans C(20,8) =                      .20555, P =  .197 (approx.)
        Bartlett-Box F(7,23007) =              2.31219, P =  .023
```
- -
Combined Observed Means for GENDER
Variable .. MAKEFUN
```
        GENDER
        female         WGT.      2.00000
                       UNWGT.    2.01847
          male         WGT.      2.24359
                       UNWGT.    2.22826
```

- -
Combined Observed Means for YEAR
Variable .. MAKEFUN
```
        YEAR
        year 3         WGT.      2.34211
                       UNWGT.    2.32102
        year 7         WGT.      1.94118
                       UNWGT.    1.94792
        year 8         WGT.      2.03509
                       UNWGT.    2.07738
        year 12        WGT.      2.14634
                       UNWGT.    2.14713
```

- -
Combined Observed Means for GENDER BY YEAR
Variable .. MAKEFUN
```
                   GENDER      female        male
        YEAR
        year 3         WGT.      2.18750     2.45455
                       UNWGT.    2.18750     2.45455
        year 7         WGT.      1.83333     2.06250
                       UNWGT.    1.83333     2.06250
        year 8         WGT.      1.91667     2.23810
                       UNWGT.    1.91667     2.23810
        year 12        WGT.      2.13636     2.15789
                       UNWGT.    2.13636     2.15789
```

- -
Tests of Significance for MAKEFUN using UNIQUE sums of squares
Source of Variation   SS   DF   MS   F   Sig of F

Source	SS	DF	MS	F	Sig of F
WITHIN CELLS	101.01	162	.62		
GENDER	1.76	1	1.76	2.83	.095
YEAR	2.63	3	.88	1.40	.244
GENDER BY YEAR	.56	3	.19	.30	.826
(Model)	5.87	7	.84	1.34	.232

(Total)   106.88   169   .63

R-Squared =   .055
Adjusted R-Squared = .014

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
    170 cases accepted.
        0 cases rejected because of out-of-range factor values.
        2 cases rejected because of missing data.
        8 non-empty cells.
        1 design will be processed.
- -
Univariate Homogeneity of Variance Tests

Variable .. NAMES   get called names by others

        Cochrans C(20,8) =   .24831, P = .019 (approx
        Bartlett-Box F(7,23007) =   2.81648, P = .006
- -
Combined Observed Means for GENDER
Variable .. NAMES
        GENDER
        female   WGT.   2.07609
                      UNWGT. 2.07939
          male   WGT.   2.38462
                      UNWGT. 2.36520

- -
Combined Observed Means for YEAR
Variable .. NAMES
        YEAR
        year 3   WGT.   2.42105
                      UNWGT. 2.37216
        year 7   WGT.   2.08824
                      UNWGT. 2.09375
        year 8   WGT.   2.15789
                      UNWGT. 2.20437
        year 12   WGT.   2.21951
                      UNWGT. 2.21890

Tests of Significance for NAMES using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	105.09	162	.65		
GENDER	3.27	1	3.27	5.04	.026
YEAR	1.41	3	.47	.72	.539
GENDER BY YEAR	2.11	3	.70	1.08	.358
(Model)	7.85	7	1.12	1.73	.106
(Total)	112.95	169	.67		

R-Squared =   .070
Adjusted R-Squared = .029

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
    170 cases accepted.
        0 cases rejected because of out-of-range factor values.
        2 cases rejected because of missing data.
        8 non-empty cells.

        1 design will be processed.
- -
Univariate Homogeneity of Variance Tests

Variable .. PICKEDON   get picked on by others

        Cochrans C(20,8) =   .22757, P = .063 (approx
        Bartlett-Box F(7,23007) =   2.23008, P = .029

```
Combined Observed Means for GENDER
Variable .. PICKEDON
        GENDER
        female      WGT.      2.01087
                    UNWGT.    1.99495
           male     WGT.      2.15385
                    UNWGT.    2.13193
```

```
Combined Observed Means for YEAR
Variable .. PICKEDON
        YEAR
        year 3       WGT.     2.28947
                     UNWGT.   2.25000
        year 7       WGT.     1.88235
                     uNWGT.   1.88542
        year 8       WGT.     2.08772
                     UNWGT.   2.09921
        year 12      WGT.     2.02439
                     UNWGT.   2.01914
```

```
Combined Observed Means for GENDER BY YEAR
Variable .. PICKEDON
                GENDER      female       male
        YEAR
        year 3       WGT.     2.00000     2.50000
                     UNWGT.   2.00000     2.50000
        year 7       WGT.     1.83333     1.93750
                     UNWGT.   1.83333     1.93750
        year 8       WGT.     2.05556     2.14286
                     UNWGT.   2.05556     2.14286
        year 12      WGT.     2.09091     1.94737
                     UNWGT.   2.09091     1.94737
```

```
Tests of Significance for PICKEDON using UNIQUE sums of squares
Source of Variation       SS       DF       MS       F   Sig of F

WITHIN CELLS           102.16      162      .63
GENDER                    .75        1      .75     1.19     .277
YEAR                     2.51        3      .84     1.32     .268
GENDER BY YEAR           2.06        3      .69     1.09     .355

(Model)                  5.84        7 .    .83     1.32     .242
(Total)                108.01      169      .64

R-Squared =             .054
Adjusted R-Squared =    .013
```

```
* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
        171 cases accepted.
          0 cases rejected because of out-of-range factor values.
          1 case rejected because of missing data.
          8 non-empty cells.

          1 design will be processed.
```

```
Univariate Homogeneity of Variance Tests

Variable .. RUMOURS              others spread rumours about me

        Cochrans C(20,8) =                      .52320, P = .000 (approx
        Bartlett-Box F(7,23330) =             10.46056, P = .000
```

```
Combined Observed Means for GENDER
Variable .. RUMOURS
        GENDER
        female       WGT.     1.85870
                     UNWGT.   1.90420
           male      WGT.     1.88608
```

```
                        UNWGT.     1.84807
```

- -

```
Combined Observed Means for YEAR
Variable .. RUMOURS
        YEAR
        year 3          WGT.      2.36842
                        UNWGT.    2.34375
        year 7          WGT.      1.67647
                        UNWGT.    1.66319
        year 8          WGT.      1.78947
                        UNWGT.    1.81349
        year 12         WGT.      1.69048
                        UNWGT.    1.68409
```

- -

```
Combined Observed Means for GENDER BY YEAR
Variable .. RUMOURS
                GENDER       female         male
        YEAR
        year 3          WGT.      2.18750      2.50000
                        UNWGT.    2.18750      2.50000
        year 7          WGT.      1.88889      1.43750
                        UNWGT.    1.88889      1.43750
        year 8          WGT.      1.72222      1.90476
                        UNWGT.    1.72222      1.90476
        year 12         WGT.      1.81818      1.55000
                        UNWGT.    1.81818      1.55000
```

- -

```
Tests of Significance for RUMOURS using UNIQUE sums of squares
Source of Variation          SS      DF        MS         F   Sig of F

WITHIN CELLS             212.91     163      1.31
GENDER                      .13       1       .13       .10      .756
YEAR                      11.38       3      3.79      2.90      .036
GENDER BY YEAR             3.78       3      1.26       .97      .410

(Model)                   16.26       7      2.32      1.78      .095
(Total)                  229.17     170      1.35

R-Squared =         .071
Adjusted R-Squared =    .031
```

```
- - - - - O N E W A Y - - - - -
```

Variable   RUMOURS   others spread rumours about me
By Variable   YEAR   year

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	12.4364	4.1455	3.1942	.0250
Within Groups	167	216.7332	1.2978		
Total	170	229.1696			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Me
year 3	38	2.3684	1.0246	.1662	2.0316 TO 2.70
year 7	34	1.6765	.6840	.1173	1.4378 TO 1.91
year 8	57	1.7895	.7731	.1024	1.5843 TO 1.99
year 12	42	1.6905	1.7736	.2737	1.1378 TO 2.24
Total	171	1.8713	1.1611	.0888	1.6961 TO 2.04

GROUP	MINIMUM	MAXIMUM
year 3	1.0000	4.0000
year 7	1.0000	4.0000
year 8	1.0000	4.0000
year 12	1.0000	12.0000
TOTAL	1.0000	12.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.6939	3	167	.170

```
- - - - - O N E W A Y - - - - -
```

Variable   RUMOURS   others spread rumours about me
By Variable   YEAR   year

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
    MEAN(J)-MEAN(I)   >= .8055 * RANGE * SQRT(1/N(I) + 1/N(J))
    with the following value(s) for RANGE: 3.67

(*) Indicates significant differences which are shown in the lower triangle

```
               Y
           y e y y
           e a e e
           a r a a
           r   r r
           1
           7 2 8 3
```

Mean	YEAR		
1.6765	year 7		
1.6905	year 12		
1.7895	year 8		
2.3684	year 3	*	

```
- - - - - Kruskal-Wallis 1-Way Anova

    RUMOURS    others spread rumours about me
by YEAR        year


    Mean Rank    Cases

        112.13        38    YEAR =    1    year 3
         80.88        34    YEAR =    2    year 7
         86.37        57    YEAR =    3    year 8
         66.00        42    YEAR =    4    year 12

                     ---

                     171    Total

                                            Corrected for ties
Chi-Square    D.F.  Significance    Chi-Square      D.F.  Significar
   17.8078      3        .0005        21.1413          3        .00C
```

Victim Questionnaire   Appendix I-2
Factor Analysis

Analysis number 1   Listwise deletion of cases with missing values

Correlation Matrix:

	BOYS	DIFFRENT	DONTLIKE	FRIENDS	GIRLS	NOFRENDS	OLDERKI
BOYS	1.00000						
DIFFRENT	.45179	1.00000					
DONTLIKE	.50119	.19090	1.00000				
FRIENDS	.43634	.45040	.29605	1.00000			
GIRLS	.30572	.28634	.19383	.54025	1.00000		
NOFRENDS	.49678	.37715	.54098	.50065	.41236	1.00000	
OLDERKID	.60304	.25050	.44268	.38512	.37827	.45670	1.0000
YOUNGKID	.41796	.37312	.24013	.51842	.56221	.36192	.2876

	YOUNGKID
YOUNGKID	1.00000

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .82352

Bartlett Test of Sphericity = 114.56876 Significance =   .00000

Extraction   1 for analysis   1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
BOYS	1.00000	*	1	3.84173	48.0	48.0
DIFFRENT	1.00000	*	2	1.14102	14.3	62.3
DONTLIKE	1.00000	*	3	.78309	9.8	72.1
FRIENDS	1.00000	*	4	.63085	7.9	80.0
GIRLS	1.00000	*	5	.53312	6.7	86.6
NOFRENDS	1.00000	*	6	.41473	5.2	91.8
OLDERKID	1.00000	*	7	.35737	4.5	96.3
YOUNGKID	1.00000	*	8	.29810	3.7	100.0

PC   extracted   2 factors.

Factor Matrix:

	Factor 1	Factor 2
BOYS	.76875	
NOFRENDS	.75662	
FRIENDS	.75362	.30877
OLDERKID	.69166	-.34983
YOUNGKID	.67851	.45042
GIRLS	.66405	.45780
DONTLIKE	.60881	-.57937
DIFFRENT	.59995	

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
BOYS	.67599	*	1	3.84173	48.0	48.0
DIFFRENT	.40808	*	2	1.14102	14.3	62.3
DONTLIKE	.70632	*				
FRIENDS	.66328	*				
GIRLS	.65055	*				
NOFRENDS	.61450	*				
OLDERKID	.60077	*				
YOUNGKID	.66326	*				

VARIMAX   rotation   1 for extraction   1 in analysis   1 - Kaiser Normalizati

VARIMAX converged in 3 iterations.

Rotated Factor Matrix:

	Factor 1	Factor 2
YOUNGKID	.79995	
GIRLS	.79479	
FRIENDS	.75455	.30650
DIFFRENT	.58222	

	Factor 1	Factor 2
DONTLIKE		.83990
BOYS	.34543	.74610
OLDERKID		.73381
NOFRENDS	.39730	.67576

Factor Transformation Matrix:

	Factor 1	Factor 2
Factor 1	.71463	.69950
Factor 2	.69950	-.71463

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *

104 cases accepted.
  0 cases rejected because of out-of-range factor values.
 68 cases rejected because of missing data.
  8 non-empty cells.

  1 design will be processed.

- -
Univariate Homogeneity of Variance Tests

Variable .. AAMEAN6

    Cochrans C(12,8) =   .17648, P = 1.000 (approx
    Bartlett-Box F(7,6713) =   .53825, P = .806

- -
Combined Observed Means for GENDER
Variable .. AAMEAN6
        GENDER
        female   WGT.   2.70280
                      UNWGT.   2.83244
          male   WGT.   2.58511
                      UNWGT.   2.60911

- -
Combined Observed Means for YEAR
Variable .. AAMEAN6
        YEAR
        year 3   WGT.   3.06378
                      UNWGT.   3.09689
        year 7   WGT.   2.94853
                      UNWGT.   2.94962
        year 8   WGT.   2.39728
                      UNWGT.   2.33539
        year 12   WGT.   2.50375
                      UNWGT.   2.50119

- -
Combined Observed Means for GENDER BY YEAR
Variable .. AAMEAN6
                GENDER   female   male
        YEAR   .
        year 3   WGT.   3.32870   2.86508
                    UNWGT.   3.32870   2.86508
        year 7   WGT.   2.95578   2.94345
                    UNWGT.   2.95578   2.94345
        year 8   WGT.   2.52106   2.14973
                    UNWGT.   2.52106   2.14973
        year 12   WGT.   2.52421   2.47817
                    UNWGT.   2.52421   2.47817

- -
Tests of Significance for AAMEAN6 using UNIQUE sums of squares
Source of Variation   SS   DF   MS   F   Sig of F

WITHIN CELLS   37.95   96   .40
GENDER   1.14   1   1.14   2.87   .093
YEAR   9.60   3   3.20   8.10   .000
GENDER BY YEAR   .87   3   .29   .73   .534

(Model)   10.49   7   1.50   3.79   .001
(Total)   48.44   103   .47

R-Squared =   .217
Adjusted R-Squared =   .160

```
- - - - -  O N E W A Y  - - - - -
```

Variable   AAMEAN6
By Variable YEAR   school year

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	8.1787	2.7262	6.7709	.0003
Within Groups	100	40.2639	.4026		
Total	103	48.4426			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
year 3	21	3.0638	.6819	.1488	2.7534	TO	3.3742
year 7	17	2.9485	.4727	.1147	2.7055	TO	3.1916
year 8	39	2.3973	.6947	.1112	2.1721	TO	2.6225
year 12	27	2.5037	.5899	.1135	2.2704	TO	2.7371
Total	104	2.6496	.6858	.0672	2.5162	TO	2.7830

GROUP	MINIMUM	MAXIMUM
year 3	1.8750	4.0000
year 7	2.3333	4.0000
year 8	1.0000	3.7500
year 12	1.1667	3.3333
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
2.3665	3	100	.075

Variable   AAMEAN6
By Variable YEAR   school year

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
    MEAN(J)-MEAN(I) >= .4487 * RANGE * SQRT(1/N(I) + 1/N(J))
    with the following value(s) for RANGE: 3.70

    (*) Indicates significant differences which are shown in the lower triangle

```
                        y
                    y   e   y   y
                    e   a   e   e
                    a   r   a   a
                    r       r   r
                    1
                    8   2   7   3
    Mean    YEAR

    2.3973  year 8
    2.5037  year 12
    2.9485  year 7      *
    3.0638  year 3      *   *
```

Victim Questionnaire   Appendix I-3
ANOVA -individual items

```
* * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
142 cases accepted.
 0 cases rejected because of out-of-range factor values.
30 cases rejected because of missing data.
 8 non-empty cells.

 1 design will be processed.
```

- -

Univariate Homogeneity of Variance Tests

Variable .. BOYS   seen boys bullied

```
    Cochrans C(17,8) =                      .24009, P =  .055 (approx.)
    Bartlett-Box F(7,13418) =              1.37042, P =  .213
```

- -

Combined Observed Means for GENDER
Variable .. BOYS

GENDER		
female	WGT.	1.98611
	UNWGT.	2.05476
male	WGT.	2.42857
	UNWGT.	2.45395

- -

Combined Observed Means for YEAR
Variable .. BOYS

YEAR		
1	WGT.	2.70833
	UNWGT.	2.65625
2	WGT.	2.26667
	UNWGT.	2.23661
year 3	WGT.	2.02041
	UNWGT.	2.04561
4	WGT.	2.07692
	UNWGT.	2.07895

- -

Combined Observed Means for GENDER BY YEAR
Variable .. BOYS

	GENDER	female	male
YEAR			
1	WGT.	2.50000	2.81250
	UNWGT.	2.50000	2.81250
2	WGT.	1.78571	2.68750
	UNWGT.	1.78571	2.68750
year 3	WGT.	1.93333	2.15789
	UNWGT.	1.93333	2.15789
4	WGT.	2.00000	2.15789
	UNWGT.	2.00000	2.15789

- -

Tests of Significance for BOYS using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	125.15	134	.93		
GENDER	5.00	1	5.00	5.35	.022 *
YEAR	6.15	3	2.05	2.20	.091
GENDER BY YEAR	2.81	3	.94	1.00	.393
(Model)	15.93	7	2.28	2.44	.022
(Total)	141.08	141	1.00		

```
R-Squared =            .113
Adjusted R-Squared =   .067
```

- -

```
* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
109 cases accepted.
  0 cases rejected because of out-of-range factor values.
 63 cases rejected because of missing data.
```

```
        8 non-empty cells.        ·

        1 design will be processed.
```
- -
Univariate Homogeneity of Variance Tests

Variable .. DIFFRENT   seen 'different' kids bullied

```
        Cochrans C(13,8) =                    .22759, P =  .192 (approx.)
        Bartlett-Box F(7,7848) =             1.43115, P =  .188
```
- -
Combined Observed Means for GENDER
Variable .. DIFFRENT
```
        GENDER
        female         WGT.     2.71875
                       UNWGT.   2.75577
          male         WGT.     2.75556
                       UNWGT.   2.81515
```
- -
Combined Observed Means for YEAR
Variable .. DIFFRENT
```
        YEAR
        1              WGT.     2.84211
                       UNWGT.   2.84444
        2              WGT.     3.04762
                       UNWGT.   3.08333
        year 3         WGT.     2.69697
                       UNWGT.   2.70455
        4              WGT.     2.52778
                       UNWGT.   2.50952
```
- -
Combined Observed Means for GENDER BY YEAR
Variable .. DIFFRENT
```
                       GENDER     female       male
        YEAR
        1              WGT.       2.88889     2.80000
                       UNWGT.     2.88889     2.80000
        2              WGT.       2.83333     3.33333
                       UNWGT.     2.83333     3.33333
        year 3         WGT.       2.68182     2.72727
                       UNWGT.     2.68182     2.72727
        4              WGT.       2.61905     2.40000
                       UNWGT.     2.61905     2.40000
```
- -
Tests of Significance for DIFFRENT using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	89.66	101	.89		
GENDER	.09	1	.09	.10	.756
YEAR	4.53	3	1.51	1.70	.172
GENDER BY YEAR	1.75	3	.58	.66	.581
(Model)	5.62	7	.80	.90	.506
(Total)	95.28	108	.88		

```
R-Squared =            .059
Adjusted R-Squared =   .000
```

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
```
        134 cases accepted.
          0 cases rejected because of out-of-range factor values.
         38 cases rejected because of missing data.
          8 non-empty cells.

          1 design will be processed.
```
- -
Univariate Homogeneity of Variance Tests

Variable .. DONTLIKE   seen disliked students bullied

```
        Cochrans C(16,8) =                    .24558, P =  .051 (approx.)
        Bartlett-Box F(7,11714) =            1.59596, P =  .131
```

```
Combined Observed Means for GENDER
Variable .. DONTLIKE
         GENDER
         female          WGT.    2.09722
                         UNWGT.  2.22817
            male         WGT.    1.91935
                         UNWGT.  1.92916
```

```
Combined Observed Means for YEAR
Variable .. DONTLIKE
         YEAR
          1              WGT.    2.37500
                         UNWGT.  2.43750
          2              WGT.    2.22222
                         UNWGT.  2.21703
       year 3            WGT.    1.79167
                         UNWGT.  1.75000
          4              WGT.    1.91429
                         UNWGT.  1.91013
```

```
Combined Observed Means for GENDER BY YEAR
Variable .. DONTLIKE
                GENDER      female         male
         YEAR
          1              WGT.    2.62500    2.25000
                         UNWGT.  2.62500    2.25000
          2              WGT.    2.35714    2.07692
                         UNWGT.  2.35714    2.07692
       year 3            WGT.    1.87500    1.62500
                         UNWGT.  1.87500    1.62500
          4              WGT.    2.05556    1.76471
                         UNWGT.  2.05556    1.76471
```

Tests of Significance for DONTLIKE using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	98.27	126	.78		
GENDER	2.63	1	2.63	3.37	.069
YEAR	8.29	3	2.76	3.54	.017
GENDER BY YEAR	.06	3	.02	.02	.995
(Model)	9.70	7	1.39	1.78	.097
(Total)	107.97	133	.81		

```
R-Squared =            .090
Adjusted R-Squared =   .039
```

- - - - - O N E W A Y - - - - -

```
        Variable  DONTLIKE    seen disliked students bullied
     By Variable  YEAR        school year
```

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	7.0190	2.3397	3.0129	.0325
Within Groups	130	100.9512	.7765		
Total	133	107.9701			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
Grp 1	24	2.3750	1.2446	.2540	1.8495	TO	2.900
Grp 2	27	2.2222	.8006	.1541	1.9055	TO	2.538
year 3	48	1.7917	.7426	.1072	1.5760	TO	2.007
Grp 4	35	1.9143	.8179	.1382	1.6333	TO	2.195

Tota	134	2.0149	.9010	.0778	1.8610	TO	2.1689

GROUP	MINIMUM	MAXIMUM
Grp 1	1.0000	4.0000
Grp 2	1.0000	4.0000
year 3	1.0000	3.0000
Grp 4	1.0000	4.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
7.7241	3	130	.000

```
      Variable  DONTLIKE   seen disliked students bullied
   By Variable  YEAR       school year
```

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
    MEAN(J)-MEAN(I)   >= .6231 * RANGE * SQRT(1/N(I) + 1/N(J))
    with the following value(s) for RANGE: 3.68

   (*) Indicates significant differences which are shown in the lower triangle

```
                          y
                          e  G  G  G
                          a  r  r  r
                          r  p  p  p

                          3  4  2  1
     Mean        YEAR

     1.7917      year 3
     1.9143      Grp 4
     2.2222      Grp 2
     2.3750      Grp 1       *
```

```
                N       Mean    Std Dev  Minimum  Maximum

DONTLIKE       134     2.01493   .90100   1.00     4.00
YEAR           172     2.61628  1.08330   1.00     4.00
```

- - - - - Kruskal-Wallis 1-Way Anova

```
    DONTLIKE    seen disliked students bullied
 by YEAR        school year

    Mean Rank    Cases

        77.69      24   YEAR =   1
        77.19      27   YEAR =   2
        59.40      48   YEAR =   3   year 3
        64.16      35   YEAR =   4

                  ---

                 134   Total
```

```
                                     Corrected for ties
  Chi-Square      D.F.  Significance   Chi-Square     D.F.  Significance
    5.6830         3       .1281         6.3615         3        .0953
```

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
     123 cases accepted.
       0 cases rejected because of out-of-range factor values.
      49 cases rejected because of missing data.
       8 non-empty cells.

       1 design will be processed.
- -
Univariate Homogeneity of Variance Tests

Variable .. FRIENDS   seen friends bullied

```
        Cochrans C(14,8) =                       .30261, P =  .005 (approx.)
        Bartlett-Box F(7,11608) =              , 1.65630, P =  .115
```

- -
Combined Observed Means for GENDER
Variable .. FRIENDS
```
        GENDER
        female         WGT.    3.51613
                       UNWGT.  3.50254
          male         WGT.    3.32787
                       UNWGT.  3.34191
```

- -
Combined Observed Means for YEAR
Variable .. FRIENDS
```
        YEAR
          1            WGT.    3.50000
                       UNWGT.  3.48958
          2            WGT.    3.58333
                       UNWGT.  3.58741
      year 3           WGT.    3.35714
                       UNWGT.  3.30000
          4            WGT.    3.31034
                       UNWGT.  3.31190
```

- -
Combined Observed Means for GENDER BY YEAR
Variable .. FRIENDS
```
                GENDER      female        male
        YEAR
```

	1	WGT.	3.41667	3.56250
		UNWGT.	3.41667	3.56250
	2	WGT.	3.63636	3.53846
		UNWGT.	3.63636	3.53846
year	3	WGT.	3.60000	3.00000
		UNWGT.	3.60000	3.00000
	4	WGT.	3.35714	3.26667
		UNWGT.	3.35714	3.26667

- -

Tests of Significance for FRIENDS using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	44.78	115	.39		
GENDER	.75	1	.75	1.93	.168
YEAR	1.69	3	.56	1.44	.234
GENDER BY YEAR	2.59	3	.86	2.21	.090
(Model)	5.24	7	.75	1.92	.072
(Total)	50.02	122	.41		

R-Squared =   .105
Adjusted R-Squared =   .050

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
      126 cases accepted.
        0 cases rejected because of out-of-range factor values.
      46 cases rejected because of missing data.
        8 non-empty cells.

      1 design will be processed.
- -
Univariate Homogeneity of Variance Tests

Variable .. GIRLS   seen girls bullied

        Cochrans C(15,8) =   .19792, P = .451 (approx.)
        Bartlett-Box F(7,10460) =   1.10150, P = .359

- -
Combined Observed Means for GENDER
Variable .. GIRLS
        GENDER
        female   WGT.   2.79487
                     UNWGT. 2.88291
          male   WGT.   2.39583
                     UNWGT. 2.45833

- -
Combined Observed Means for YEAR
Variable .. GIRLS
        YEAR
          1   WGT.   2.68000
                     UNWGT. 2.65385
          2   WGT.   3.13043
                     UNWGT. 3.10714
        year 3   WGT.   2.47826
                     UNWGT. 2.35484
          4   WGT.   2.50000
                     UNWGT. 2.56667
- -

Tests of Significance for GIRLS using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	93.38	118	.79		
GENDER	5.02	1	5.02	6.34	.013
YEAR	8.15	3	2.72	3.43	.019
GENDER BY YEAR	12.81	3	4.27	5.40	.002
(Model)	25.55	7	3.65	4.61	.000
(Total)	118.93	125	.95		

```
R-Squared =            .215
Adjusted R-Squared =   .168
```

```
                     INTERACTION - GIRL
          - - - - -  O N E W A Y  - - - - -
```

```
        Variable  GIRLS      seen girls bullied
     By Variable  CELL       cell
```

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	7	25.5484	3.6498	4.6120	.0001
Within Groups	118	93.3801	.7914		
Total	125	118.9286			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mear		
Grp 1	13	3.3077	.8549	.2371	2.7911	TO	3.8243
Grp 2	14	3.2143	.5789	.1547	2.8800	TO	3.5486
Grp 3	31	2.7097	.8638	.1552	2.3928	TO	3.0265
Grp 4	20	2.3000	.8013	.1792	1.9250	TO	2.6750
Grp 5	12	2.0000	1.1282	.3257	1.2832	TO	2.7168
Grp 6	9	3.0000	.7071	.2357	2.4565	TO	3.5435
Grp 7	15	2.0000	1.0690	.2760	1.4080	TO	2.5920
Grp 8	12	2.8333	1.0299	.2973	2.1790	TC	3.4877
Total	126	2.6429	.9754	.0869	2.4709	TO	2.8148

GROUP	MINIMUM	MAXIMUM
Grp 1	2.0000	4.0000
Grp 2	2.0000	4.0000
Grp 3	1.0000	4.0000
Grp 4	1.0000	3.0000
Grp 5	1.0000	4.0000
Grp 6	2.0000	4.0000
Grp 7	1.0000	4.0000
Grp 8	1.0000	4.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.7983	7	118	.094

```
        Variable  GIRLS      seen girls bullied
     By Variable  CELL       cell
```

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
    MEAN(J)-MEAN(I) >= .6290 * RANGE * SQRT(1/N(I) + 1/N(J))
    with the following value(s) for RANGE: 4.36

    (*) Indicates significant differences which are shown in the lower triangle

```
                          G G G G G G G G
                          r r r r r r r r
                          p p p p p p p p

                          5 7 4 3 8 6 2 1
        Mean      CELL

        2.0000    Grp 5
        2.0000    Grp 7
```

```
2.3000     Grp 4
2.7097     Grp 3
2.8333     Grp 8
3.0000     Grp 6
3.2143     Grp 2
3.3077     Grp 1
```

* * * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *

        136 cases accepted.
          0 cases rejected because of out-of-range factor values.
        36 cases rejected because of missing data.
          8 non-empty cells.

        1 design will be processed.
- -
Univariate Homogeneity of Variance Tests

Variable .. NOFRENDS   seen friendless kid bullied

        Cochrans C(16,8) =   .16964, P = 1.000 (approx.)
        Bartlett-Box F(7,13394) =   .34629, P =   .933

- -
Combined Observed Means for GENDER
Variable .. NOFRENDS
        GENDER
        female   WGT.   2.60000
                      UNWGT.   2.77025
         male   WGT.   2.43939
                      UNWGT.   2.45238
- -
Combined Observed Means for YEAR
Variable .. NOFRENDS
        YEAR
          1   WGT.   2.96296
                      UNWGT.   3.09412
          2   WGT.   2.70370
                      UNWGT.   2.70604
        year 3   WGT.   2.25000
                      UNWGT.   2.23333
          4   WGT.   2.41176
                      UNWGT.   2.41176
- -
Tests of Significance for NOFRENDS using UNIQUE sums of squares
Source of Variation   SS   DF   MS   F Sig of F

WITHIN CELLS   119.07   128   .93
GENDER   3.15   1   3.15   3.38   .068
YEAR   13.27   3   4.42   4.75   .004
GENDER BY YEAR   4.43   3   1.48   1.59   .195

(Model)   16.86   7   2.41   2.59   .016
(Total)   135.93   135   1.01

R-Squared =   .124
Adjusted R-Squared =   .076
```

- - - - - O N E W A Y - - - - -

        Variable   NOFRENDS    seen friendless kid bullied
        By Variable   YEAR     school year

                      Analysis of Variance

| Source | D.F. | Sum of Squares | Mean Squares | F Ratio | F Prob. |
|---|---|---|---|---|---|

| | | | Standard | Standard | | | |
|---|---|---|---|---|---|---|---|
| Within Groups | 132 | 125.8279 | | .9532 | | | |
| Total | 135 | 135.9338 | | | | | |

| Group | Count | Mean | Standard Deviation | Standard Error | 95 Pct Conf Int for Mean | | |
|---|---|---|---|---|---|---|---|
| Grp 1 | 27 | 2.9630 | .9799 | .1886 | 2.5753 | TO | 3.3506 |
| Grp 2 | 27 | 2.7037 | .9121 | .1755 | 2.3429 | TO | 3.0645 |
| year 3 | 48 | 2.2500 | 1.0417 | .1504 | 1.9475 | TO | 2.5525 |
| Grp 4 | 34 | 2.4118 | .9250 | .1586 | 2.0890 | TO | 2.7345 |
| Total | 136 | 2.5221 | 1.0035 | .0860 | 2.3519 | TO | 2.6922 |

| GROUP | MINIMUM | MAXIMUM |
|---|---|---|
| Grp 1 | 1.0000 | 4.0000 |
| Grp 2 | 1.0000 | 4.0000 |
| year 3 | 1.0000 | 4.0000 |
| Grp 4 | 1.0000 | 4.0000 |
| TOTAL | 1.0000 | 4.0000 |

Levene Test for Homogeneity of Variances

| Statistic | df1 | df2 | 2-tail Sig. |
|---|---|---|---|
| .6338 | 3 | 132 | .594 |

Variable   NOFRENDS   seen friendless kid bullied
By Variable   YEAR   school year

Multiple Range Tests:   Tukey-HSD test with significance level .050

The difference between two means is significant if
    MEAN(J)-MEAN(I)   >= .6904 * RANGE * SQRT(1/N(I) + 1/N(J))
    with the following value(s) for RANGE: 3.68

(*) Indicates significant differences which are shown in the lower triangle

```
                              y
                              e  G  G  G
                              a  r  r  r
                              r  p  p  p

                              3  4  2  1
        Mean       YEAR

        2.2500     year 3
        2.4118     Grp 4
        2.7037     Grp 2
        2.9630     Grp 1           *
```

```
* * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
        100 cases accepted.
          0 cases rejected because of out-of-range factor values.
         72 cases rejected because of missing data.
          8 non-empty cells.

          1 design will be processed.
```
- -
Univariate Homogeneity of Variance Tests

Variable .. OLDERKID   seen older kids bullied

```
        Cochrans C(12,8) =                      .20390, P =  .499 (approx.)
        Bartlett-Box F(7,6692) =                .74661, P =  .632
```
- -
Combined Observed Means for GENDER
Variable .. OLDERKID

GENDER		
female	WGT.	2.24074
	UNWGT.	2.39693
male	WGT.	2.04348
	UNWGT.	2.08304

- -
Combined Observed Means for YEAR
Variable .. OLDERKID

YEAR		
1	WGT.	3.05000
	UNWGT.	3.05000
2	WGT.	2.10526
	UNWGT.	2.14205
year 3	WGT.	1.72973
	UNWGT.	1.67000
4	WGT.	2.08333
	UNWGT.	2.09790

- -
Combined Observed Means for GENDER BY YEAR
Variable .. OLDERKID

	GENDER	female	male
YEAR			
1	WGT.	3.10000	3.00000
	UNWGT.	3.10000	3.00000
2	WGT.	2.37500	1.90909
	UNWGT.	2.37500	1.90909
year 3	WGT.	1.84000	1.50000
	UNWGT.	1.84000	1.50000
:	WGT.	2.27273	1.92308
	UNWGT.	2.27273	1.92308

- -
Tests of Significance for OLDERKID using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	67.15	92	.73		
GENDER	2.23	1	2.23	3.05	.084
YEAR	23.73	3	7.91	10.84	.000
GENDER BY YEAR	.35	3	.12	.16	.923
(Model)	25.60	7	3.66	5.01	.000
(Total)	92.75	99	.94		

```
R-Squared =              .276
Adjusted R-Squared =     .221
```

- -
                    MAIN EFFECT x older
          - - - - - O N E W A Y - - - - -

        Variable OLDERKID   seen older kids bullied
     By Variable YEAR   school year

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	3	22.8799	7.6266	10.4788	.0000
Within Groups	96	69.8701	.7278		
Total	99	92.7500			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
Grp 1	20	3.0500	1.0501	.2348	2.5586	TO	3.5414
Grp 2	19	2.1053	.8753	.2008	1.6834	TO	2.5271
year 3	37	1.7297	.8045	.1323	1.4615	TO	1.9979
Grp 4	24	2.0833	.7173	.1464	1.7805	TO	2.3862
Total	100	2.1500	.9679	.0968	1.9579	TO	2.3421

GROUP	MINIMUM	MAXIMUM
Grp 1	1.0000	4.0000
Grp 2	1.0000	4.0000
year 3	1.0000	4.0000
Grp 4	1.0000	3.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
1.5770	3	96	.200

Variable   OLDERKID   seen older kids bullied
By Variable YEAR   school year

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
    MEAN(J)-MEAN(I) >= .6032 * RANGE * SQRT(1/N(I) + 1/N(J))
    with the following value(s) for RANGE: 3.70

(*) Indicates significant differences which are shown in the lower triangle

```
                              y
                              e  G  G  G
                              a  r  r  r
                              r  p  p  p

                              3  4  2  1
     Mean       YEAR

     1.7297     year 3
     2.0833     Grp 4
     2.1053     Grp 2
     3.0500     Grp 1         *  *  *
```

```
* * * * * A n a l y s i s   o f   V a r i a n c e * * * * * *
         125 cases accepted.
           0 cases rejected because of out-of-range factor values.
          47 cases rejected because of missing data.
           8 non-empty cells.

           1 design will be processed.
```
- -

Univariate Homogeneity of Variance Tests

Variable .. YOUNGKID   seen younger kids bullied

```
        Cochrans C(15,8) =                       .27436, P =  .016 (approx.)
        Bartlett-Box F(7,11299) =               2.06796, P =  .043
```

- -

Combined Observed Means for GENDER
Variable .. YOUNGKID
```
        GENDER
        female      WGT.     3.16667
                    UNWGT.   3.11543
          male      WGT.     2.91525
                    UNWGT.   2.91086
```

- -

Combined Observed Means for YEAR
Variable .. YOUNGKID
```
        YEAR
          1         WGT.     3.04000
                    UNWGT.   3.03125
          2         WGT.     3.29630
                    UNWGT.   3.29396
        year 3      WGT.     3.04878
                    UNWGT.   2.88228
          4         WGT.     2.84375
                    UNWGT.   2.84510
```

- -

Combined Observed Means for GENDER BY YEAR
Variable .. YOUNGKID
```
                GENDER      female       male
        YEAR
          1         WGT.     3.00000    3.06250
                    UNWGT.   3.00000    3.06250
          2         WGT.     3.23077    3.35714
                    UNWGT.   3.23077    3.35714
        year 3      WGT.     3.40741    2.35714
                    UNWGT.   3.40741    2.35714
          4         WGT.     2.82353    2.86667
                    UNWGT.   2.82353    2.86667
```

- -

Tests of Significance for YOUNGKID using UNIQUE sums of squares

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	82.40	117	.70		
GENDER	1.20	1	1.20	1.71	.194
YEAR	3.62	3	1.21	1.72	.168
GENDER BY YEAR	8.09	3	2.70	3.83	.012
(Model)	13.32	7	1.90	2.70	.012
(Total)	95.71	124	.77		

```
R-Squared =              .139
Adjusted R-Squared =     .088·
```

```
                    INTERACTION X YOUNGER
              - - - - - O N E W A Y - - - - -

        Variable  YOUNGKID   seen younger kids bullied
      By Variable CELL       cell
```

Analysis of Variance

Source	D.F.	Sum of Squares	Mean Squares	F Ratio	F Prob.
Between Groups	7	13.3158	1.9023	2.7011	.0125
Within Groups	117	82.3962	.7042		
Total	124	95.7120			

Group	Count	Mean	Standard Deviation	Standard Error	95 Pct Conf Int for Mean		
Grp 1	9	3.0000	1.3229	.4410	1.9831	TO	4.0169
Grp 2	13	3.2308	.7250	.2011	2.7926	TO	3.6689
Grp 3	27	3.4074	.5724	.1102	3.1810	TO	3.6338
Grp 4	17	2.8235	.8828	.2141	2.3696	TO	3.2774
Grp 5	16	3.0625	.8539	.2135	2.6075	TO	3.5175
Grp 6	14	3.3571	.6333	.1693	2.9915	TO	3.7228
Grp 7	14	2.3571	1.0818	.2891	1.7325	TO	2.9818
Grp 8	15	2.8667	.8338	.2153	2.4049	TO	3.3284
Total	125	3.0480	.8786	.0786	2.8925	TO	3.2035

GROUP	MINIMUM	MAXIMUM
Grp 1	1.0000	4.0000
Grp 2	2.0000	4.0000
Grp 3	2.0000	4.0000
Grp 4	1.0000	4.0000
Grp 5	1.0000	4.0000
Grp 6	2.0000	4.0000
Grp 7	1.0000	4.0000
Grp 8	1.0000	4.0000
TOTAL	1.0000	4.0000

Levene Test for Homogeneity of Variances

Statistic	df1	df2	2-tail Sig.
2.6143	7	117	.015

        Variable YOUNGKID   seen younger kids bullied
     By Variable CELL   cell

Multiple Range Tests: Tukey-HSD test with significance level .050

The difference between two means is significant if
  MEAN(J)-MEAN(I) >= .5934 * RANGE * SQRT(1/N(I) + 1/N(J))
  with the following value(s) for RANGE: 4.36

(*) Indicates significant differences which are shown in the lower triangle

```
                        G G G G G G G G
                        r r r r r r r r
                        p p p p p p p p

                        7 4 8 1 5 2 6 3
    Mean       CELL

    2.3571     Grp 7
    2.8235     Grp 4
    2.8667     Grp 8
    3.0000     Grp 1
    3.0625     Grp 5
    3.2308     Grp 2
    3.3571     Grp 6     *
    3.4074     Grp 3     *
```

- - - - - Kruskal-Wallis 1-Way Anova

    YOUNGKID   seen younger kids bullied

by YEAR   school year

     Mean Rank   Cases

       64.60   25   YEAR =   1
       71.35   27   YEAR =   2
       63.70   41   YEAR =   3   year 3
       53.81   32   YEAR =   4

                ---
               125   Total

			Corrected for ties		
Chi-Square	D.F.	Significance	Chi-Square	D.F.	Significance
3.5568	3	.3135	4.0937	3	.2515