What hurts?

The reported consequences of negative interactions with peers among Australian adolescent school children

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The prevalence and hurtfulness of aggressive actions from peers at school experienced by Australian adolescents was examined with a sample of 652 Year 9 students (mean age 14 years) attending seven secondary schools in Adelaide, South Australia. Kinds of aggressive actions reported were categorised as physical, verbal and relational. In general, boys reported receiving more physical aggression; girls more relational aggression. Although girls tended to report being hurt more by aggressive acts than boys, they were similar in reporting acts of relational aggression, such as exclusion, as more hurtful to them than being subjected to physical aggression. Implications for interventions to reduce aggression in schools are discussed.

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Many recent studies have reported that a substantial minority of school children are subjected repeatedly to peer aggression at school (see Smith et al, 1999)). In Australia, a large scale survey of approximately 38,000 school children has estimated that around 1 child in 6 is victimised by peers on a weekly basis (Rigby, 1997c). Some of these children become highly distressed and suffer a deterioration in mental health; for example, they tend to lose self esteem, become severely depressed and absent themselves from school (Rigby, 1999; Rigby & Slee, 1999). What is, as yet, unclear is what kinds of negative treatments from peers are most hurtful and whether boys and girls are equally or differently affected.

Most research on the effects of negative peer treatment has not attempted to differentiate between the kinds of negative treatments that are experienced. For instance, Rigby (1997a) has reported that among Australian adolescents who are bullied weekly, some 39% become angry and 33% become sad and miserable. However, the students providing this data were responding to a question about bullying in general and not about specific kinds of peer abuse.

There are different ways in which aggressive or bullying behaviour can be classified, for example, as 'direct' as in inflicting blows or delivering verbal insults, or 'indirect' as in excluding people unfairly from desired activities or spreading unpleasant rumours about them (Bjorkqvist, 1994). This latter type of aggression is sometimes called 'relational aggression', or social aggression, because its intention is to damage relationships with others (see Crick & Grotpeter, 1995). In recent years relational or social aggression has attracted much attention from researchers into peer aggression among children (Galen & Underwood, 1997; Paquette & Underwood, 1999).

There have been two studies undertaken in the United States that are relevant to the question of how hurtful different kinds of negative peer treatments may be to school children. Galen and Underwood (1997) reported that among school children in grades 4, 7 and 10, boys thought that physical aggression was more hurtful than social or relational aggression, whereas for girls they were equally hurtful. They also reported that girls rated social aggression as more hurtful than did boys. Both of these generalisations were supported in a subsequent study with young American adolescents by Paquette and Underwood (1999) who reported specifically in their study on the reactions of students who had been treated negatively in both ways.

Much may depend, however, on what the respondents in the American studies understood by 'being hurt.' Galen and Underwood (1997) point out that being hurt can be understood as applying to both psychological and physical damage. But we should ask whether boys and girls generally respond to a question of whether they have been hurt in the same way. Girls, it seems, appear more ready to disclose rather than deny the emotional hurt they feel than boys (Archana, 2000; Hess et al, 2000). Hence we considered that it was important in asking questions of boys and girls to emphasise that being hurt can involve feelings, for example, 'being upset,' and is not simply limited to physical pain.

Because there has been some uncertainty, reflected in the research literature, as to how the kinds of peer aggression among school children should be categorised, we derived the categories to be used in this study from an analysis of information provided by the target population – in this case students in Year 9 in Australian high schools.

In summary, the aim of this study was to examine the prevalence of aggressive behaviours among Australian school children and the reported hurtfulness of different kinds of aggressive peer behaviour; and to identify similarities and differences in the reactions to aggression of boys and girls.

METHOD

Preliminary study

The first step was to ascertain from students a range of negative treatments from peers to which adolescent school students are exposed. This was done in 1997 as part of an enquiry into what adolescents say about conflict (Bagshaw, 1998). Seventeen single sex and mixed sex Focus Groups, comprising 146 Year 9 students, were conducted in seven schools in metropolitan Adelaide. In the course of discussions with students on the conflicts they had observed in their school, some fifty kinds of negative treatments were identified.

Main study

A questionnaire was assembled containing a list of the 50 negative treatments identified in the preliminary study. Students were asked to read each description carefully, for example, 'I was called names I didn't like', and then to indicate first how often it had happened to them during the school year. The response categories were 'never,' 'sometimes' and 'often'. Next, they were asked to say in relation to each treatment they had experienced during the year 'how hurt or upset' they had generally felt about it. The response categories were 'not at all,' 'a bit' and 'a lot.' In addition respondents were asked to give their sex and age, but not their names.

Subjects

With ethical approval for the study from the University of South Australia, seven schools were approached to participate in the second stage of the project. Five of these were co-educational schools (three private and two state), one was a private girls' school and one a private boys' school. Most of the schools were situated in areas of medium to high socio-economic status. An exception was School A with a catchment area that was predominantly of low socio-economic status. Thus a range of both the type of school and socio-economic status of student background was accommodated in the study. Each school informed the parents of the students (all in Year 9) of the nature of the inquiry and obtained written permission from them and their children for participation in the study. In total, the sample was composed of 197 boys and 243 girls from coeducational schools and 92 boys and 120 girls from single sex schools. The mean age of students was 14.39 years, with a standard deviation of 0.54. Not all students answered every question: the numbers responding to particular items are given in the results. Care was taken to ensure that the anonymity of respondents was protected and the schools were assured of confidentiality when results were reported.

CATEGORIES OF AGGRESSION AND REPORTED FREQUENCIES

In order to determine the main categories of aggression as reported by the students, their responses were coded on a 1 to 3 scale for each item (from 'never' to 'often') and were then subjected to a Principal Components Analysis followed by varimax rotation. Further technical details are given in Rigby and Bagshaw (2000). This process enabled us to reliably identify 3 main factors, corresponding to physical, verbal and what we termed relational or indirect aggression. Sets of 10 items with the highest item-total correlations on each factor were used to construct three scales of good internal consistency. These measures were called:

1) The Physical Aggression Scale (example, 'being deliberately hit')
2) The Verbal Aggression, Scale (example, 'being called names I didn't like'), and

Table 1 Percentages of students reporting on frequency of negative physical treatments by peers at school

		PHYSICAL TREATMENT		
ITEMS		NEVER	SOMETIMES	OFTEN
I was deliberately hit (P1)	M (286)	39.2	48.6	12.2***
	F (340)	75.3	20.9	3.8
I had things thrown at me (P2)	M (283)	43.8	45.9	10.2***
	F (340)	59.7	33.5	6.8
I was pressured to fight with someone (P3)	M (284)	66.5	27.8	5.6***
	F (341)	88.0	10.0	2.1
I was kicked (P4)	M (287)	63.1	28.6	8.4***
	F (338)	80.8	15.7	3.6
I was tripped (P5)	M (287)	57.5	34.5	8.0**
	F (338)	70.7	23.7	5.6
I was threatened with a weapon (P6)	M (280)	80.6	15.3	4.2***
	F (340)	95.3	4.7	0.0
I was slapped across the face (P7)	M (287)	83.6	11.8	4.5
	F (340)	83.8	13.5	2.6 ns
I was touched in a sexual way against my will (P8)	M (288)	88.5	6.3	5.2**
	F (339)	88.5	10.3	1.2
My possessions were hidden or moved (P9)	M (288)	56.4	36.6	7.0
	F (339)	63.0	34.6	2.3 ns
I was spat at (P10)	M (286)	78.0	17.5	4.5
	F (340)	85.0	12.4	2.6 ns

NOTE: Significance of differences in this table and tables 2, 3 and 4 assessed by chi square: * = .05 ** = .01 *** = .001

3) The Relational Aggression Scale (example, 'rumours were spread about me').

The details of responses made to these items are given in Tables 1, 2 and 3.

Physical aggression

The extent to which the respondents had experienced negative physical treatments is given in Table 1. What stands out is that a very substantial proportion of students, especially boys, were subjected to negative physical treatments by peers. Most boys reported being deliberately hit by others; most boys had things thrown at them. As one would expect, a relatively small proportion of students reported that they were treated in this way 'often'; but even here at least 1 boy in 10 was often the target of physical violence. Among girls, the incidence was notably lower in relation to each treatment, but is clearly not negligible, with 1 girl in 4 reporting having been deliberately hit. Some of the negative treatments appeared to be experienced by only a small minority of students, for example, being touched sexually against one's will was reported by 11.5% of girls and the same proportion of boys. Yet such experiences can be highly upsetting (see Table 5 for reported harmfulness). Disturbingly, a substantial minority of students (about 1 in 5 boys) reported that they had been threatened at school with a weapon.

Table 2 Percentages of students reporting on frequency of negative verbal treatments by peers at school

		VERBAL TREATMENT		
ITEMS		NEVER	SOMETIMES	OFTEN
I got teased about something (V1)	M (284) F (341)	16.2 15.2	72.9 76.0	10.9 8.8
Somebody picked an argument with me (V2)	M (285) F (342)	26.7 35.1	63.9 54.7	9.5 10.2
Jokes were made at my expense (V3)	M (284) F (339)	28.9 36.3	62.3 54.0	8.8 9.7
Unpleasant things said about my appearance (V4)	M (285) F (338)	42.8 38.8	46.3 50.0	10.9 11.2
I was threatened with harm at school (V5)	M (280) F (336)	64.3 79.5	19.6 15.8	6.1*** 4.8
'Put down' because of my interests or hobbies (V6)	M (286) F (340)	57.7 64.1	35.3 32.1	7.0 3.8
I was sworn at (V7)	M (283) F (334)	12.7 18.6	51.6 50.6	35.7 30.8
I was called names I didn't like (V8)	M (280) F (334)	35.0 35.0	48.9 53.3	16.1 11.7
People labelled me in a way I didn't like (V9)	M (275) F (335)	67.3 57.9	27.6 35.5	5.1 6.6
I was 'paid out' (V10)	M (270) F (334)	23.0 25.4	61.5 57.2	15.6 17.4

Table 3 Percentages of students reporting on frequency of negative relational/indirect treatments by peers at school

		NEGATIVE RELATIONAL/ INDIRECT TREATMENT		
ITEMS		NEVER	SOMETIMES	OFTEN
Lies were spread about me (R1)	M (287) F (340)	62.7 50.6	32.4 43.2	4.9 6.2**
My secrets were told to others (R2)	M (286) F (341)	75.9 45.2	20.6 44.6	3.5 10.3***
Rumours were spread about me (R3)	M (281) F (339)	63.0 50.7	31.0 43.1	6.0 6.2**
Someone stopped talking to me (R4)	M (284) F (337)	55.6 28.8	39.8 59.6	4.6 11.6***
I received harassing phone calls (R5)	M (288) F (343)	86.8 74.9	9.0 20.7	4.2 4.4***
I got excluded from a group (R6)	M (288) F (340)	75.7 68.8	20.5 27.4	3.8 3.8
Somebody persuaded a group to gang up on me (R7)	M (284) F (340)	82.4 81.2	14.1 14.4	3.5 4.4
I was continually stared at by somebody (R8)	M (284) F (340)	72.9 52.6	20.1 35.0	7.0 12.4***
I was avoided or ignored by people (R9)	M (286) F (340)	65.7 44.7	29.7 49.4	4.5 5.9***
Somebody tried to break up a friendship I had (R10)	M (286) F (343)	72.0 40.2	22.0 49.9	5.9 9.9***

Verbal aggression

Details of the incidence of verbal aggression are given in Table 2.

Verbal aggression between peers at school was very common. An overwhelming majority of students (at least 65%) of both sexes reported being teased, sworn at, called names, 'paid out', and having arguments picked with them. Being sworn at 'often' is the experience of about one student in three. Most students (boys and girls) indicated that 'unpleasant things were said about their appearance'. A minority of students appeared to attract a good deal of abuse, with name calling being directed 'often' towards more than 10% of students. Unlike the case with physical bullying, on no item were boys and girls significantly different in the degree of verbal ill treatment they reported.

Relational aggression

Details of the incidence of relational aggression are given in Table 3.

Generally, the responses to items in this category suggest substantial numbers of students, especially girls, were subjected to relational aggression. A majority of girls indicated that their secrets had been told to others, someone had stopped talking to them, they had been

avoided or ignored by people and that someone had tried to break up a friendship. Whilst boys appeared to experience less relational aggression, there were nevertheless many boys (over 30%) who had had lies and rumours spread about them, others ignoring them or stopping talking to them.

GENDER AND SCHOOL DIFFERENCES

Multivariate analyses were conducted to compare the incidence of negative treatments reported by boys and girls, controlling for attendance at different schools. Further details of the analyses and the results are given in Rigby and Bagshaw (2000). Here we may note the significant differences in mean scores on the three scales. Overall, boys scored higher than girls on the measure of reported physical aggression ($p < .001$); girls scored significantly higher on the Relational Aggression Scale ($p < .001$). There were no significant differences between the sexes on the Verbal Aggression Scale ($p > .05$). Comparisons between schools produced only one significant difference. Girls in one of the coeducational schools scored higher than girls attending other schools on reported physical aggression. In general, there was little difference between the degree and kind of aggression experienced between students in the different schools, but substantial differences between the sexes, with boys experiencing more negative physical aggression from peers and girls experiencing more relational type aggression.

THE HURTFULNESS OF PEER AGGRESSION

In general, what was most hurtful for girls was most hurtful for boys. Results relating to how students react to the treatments from their peers are given in Table 4.

The results are presented in Table 4 in decreasing levels of reported hurtfulness, based upon the percentages of students reporting that they had been hurt or upset 'a lot'. The rank order for boys and girls was similar. The Spearman rank order correlation, based on percentages indicating 'a lot' between results for boys and girls over 30 items was .75 ($p < .001$).

Reactions to specific kinds of ill treatment varied widely. About half the students who experienced someone trying to break up a friendship were hurt 'a lot' by it. No student reported being hurt 'a lot' by teasing, although a minority of those teased (6% of boys and 12% of girls) were hurt 'a bit'. Generally girls reported being more hurt than boys on 21 of the 30 treatments; this was significantly so by chi square ($p < .05$). However, the relative hurtfulness of the different kinds of treatments was similar. Both boys and girls reported that relational bullying was the most hurtful. Someone seeking to break their friendships was the most hurtful for both boys and girls. For both sexes verbal treatments tended to be least hurtful, although there was a wide range; for example, being sworn at (a very common experience - see Table 2) was seen as hurtful by relatively few. Remarks about one's appearance, though less common, were likely to be much more hurtful.

Table 4 Reported hurtfulness of treatments by peers for male and female schoolchildren: percentages reporting

ITEMS (abbreviated)	BOYS			GIRLS			p<
	NOT	A BIT	A LOT	NOT	A BIT	A LOT	
Breaking friendship (R10)	22.7	33.3	43.9 (66)	7.3	37.6	55.1 (178)	.01
Ganged up on (R7)	28.6	38.1	33.3 (42)	10.3	43.1	46.6 (58)	ns
Got excluded (R6)	25.8	43.5	30.6 (62)	10.4	42.7	46.9 (96)	.05
Sexual touching (P8)	34.6	30.8	34.6 (26)	20.6	38.2	41.2 (34)	ns
Secrets told (R2)	27.4	46.8	25.8 (62)	11.4	44.0	44.6 (166)	.01
Lies spread (R1)	30.4	51.1	18.5 (92)	15.5	43.2	41.2 (148)	.001
Threat with harm (V5)	47.1	35.6	17.2 (87)	31.3	29.7	39.1 (64)	.01
Being 'labelled' (V9)	27.7	51.8	20.5 (83)	15.0	51.1	33.8 (133)	.05
Avoided (R9)	34.1	43.2	22.7 (88)	16.9	54.8	28.3 (166)	.01
Phone harassment (R5)	43.8	31.3	25.0 (32)	32.9	42.1	25.0 (76)	ns
Weapon threat (P6)	53.7	29.3	17.1 (41)	50.0	21.4	28.6 (14)	ns
Spat at (P10)	37.5	33.9	28.6 (56)	39.1	45.7	15.2 (46)	ns
Called names (V8)	40.4	44.0	15.7 (166)	14.2	61.8	24.0 (204)	.001
Rumours about me (R12)	69.3	22.0	8.7 (218)	43.5	33.6	22.9 (253)	.001
Remarks on appearance (V4)	56.9	32.9	10.2 (225)	35.6	35.6	28.8 (264)	.01
Being deliberately hit (P1)	53.6	33.3	13.1 (153)	33.3	41.3	25.3 (75)	.01
Kicked (P4)	44.7	37.2	18.1 (94)	38.6	45.6	15.8 (57)	ns
Face slapped (P7)	62.9	28.6	8.6 (35)	26.0	50.0	24.0 (50)	.01
Stopped talking (R4)	70.2	22.5	7.3 (218)	32.5	44.9	22.6 (265)	.001
Jokes about me (V3)	43.8	44.9	11.2 (178)	26.3	55.6	18.2 (198)	.001
Pressured to fight (P3)	68.2	24.7	7.1 (85)	21.9	59.4	18.8 (32)	.001
Tripped (P5)	55.7	33.0	11.3 (106)	47.8	37.8	14.4 (90)	ns
Possessions moved (P9)	48.6	38.3	13.1 (107)	34.2	53.5	12.3 (114)	ns
Continually stared at (R8)	62.9	25.8	11.3 (62)	41.2	45.9	12.8 (148)	.05
Thrown at (P2)	51.9	38.5	9.6 (135)	47.2	38.6	14.2 (127)	ns
Being 'put down' (V6)	59.2	32.0	8.7 (103)	37.7	49.1	13.2 (114)	.01
Been 'paid out' (V10)	46.9	45.1	8.0 (175)	29.2	58.4	12.4 (226)	.01
Picked argument (V2)	73.3	23.9	2.8 (176)	34.9	51.8	13.3 (195)	.001
Being sworn at (V13)	80.2	15.0	4.8 (227)	64.1	28.9	7.0 (270)	.001
Teased (V1)	93.6	6.4	0.0 (235)	87.5	12.5	0.0 (287)	.05

NOTE: (1) In parentheses are the numbers reporting having had that experience during the school year.
(2) The full descriptions of the items are given in Tables 1, 2 and 3.

Table 5 Mean rankings on reported hurtfulness for physical, verbal and relational treatments for male and female respondents

	MALE	FEMALE
Relational	9.50	8.85
Physical	14.15	16.40
Verbal	19.85	18.25

NOTE: Rankings are computed such that the highest ranking is scored as 1, the lowest as 30.

If we examine summarised results for rankings of the items as to hurtfulness from 1 to 30 (see Table 5), we find that the mean ranking for relational aggression is the highest for both boys and girls, and the mean ranking for verbal aggression is lowest for boys and girls.

Further analyses using the Kruskal-Wallis One Way ANOVA to examine differences between the rankings (Siegel, 1956, p 184-194) led to these conclusions. Among both boys and girls the mean ranking for relational aggression was significantly higher than for verbal aggression ($p < .05$). Among girls (but not boys) the ranking for relational aggression was significantly higher than the ranking for physical aggression ($p < .05$).

DISCUSSION

This study has provided further evidence of the prevalence of aggressive behaviour experienced by school children from their peers. Unlike earlier studies, however, it has quantified the incidence of specific kinds of aggression suffered by both boys and girls attending a particular year (Year 9) in a range of Australian high schools. It is clear that substantial proportions of students are recipients of a wide range of negative treatments from peers. For example, during the school year studied most boys had been deliberately hit by their peers, some 12% 'often'. Some 65% of boys and girls had been called names they did not like, more than 10% 'often'. More than 30% of girls had been excluded from groups. These figures suggest that there is a level of conflict occurring in Australian secondary schools between students that should be addressed.

The three dimensions of aggressive behaviour assessed in this study are very similar to those chosen by Mynard and Joseph (2000), who used a Principal Components Analysis to identify as their first three dimensions: Physical Victimization, Verbal Victimization and Social Manipulation. Their fourth dimension – Attacks on Property – did not emerge as a factor in our analysis. The analyses we performed enabled us to construct three reliable multi-item scales using items that had been derived from Australian Year 9 students. Using these measures it was found that the schools did not differ significantly in the extent to which their students were ill treated by peers verbally or relationally. On only one scale, that assessing physical aggression, was there a significant difference between any of the schools, with female students at one school reporting having experienced more physical aggression from peers than was found among girls at other schools.

Previous studies of sex differences in aggression experienced by others have mainly concentrated on differences in the extent to which boys and girls are treated negatively in a general way by their peers. For instance, it has been reported that boys are more likely than girls to be 'bullied' (Olweus, 1993). By distinguishing between more direct forms of aggression (physical and verbal) and indirect or relational forms of aggression, the results show that among young Australian adolescent school children boys are the recipients of more physical abuse whilst girls are more likely to be the targets of relational abuse.

From this study it also appears that girls are likely to report being hurt or upset more than boys when they are treated negatively by their peers at school. Whether this is because they are more vulnerable to peer abuse generally or whether they are more prepared to report their hurt feelings cannot be firmly decided on the basis of these results. Studies suggesting that girls suffer more serious psychological and physical consequences as a result of being bullied (Rigby, 1998) would incline one to the view that they may in fact be more vulnerable. Although, as we have seen, girls are more prone to be victims of relational abuse (which appears to be more hurtful than other forms of abuse), it cannot be argued that the differences in the kinds of abuse to which they are commonly subjected provide the full answer to why girls report greater hurt. Girls report being more adversely affected by direct forms of aggression, for example, physical aggression, as well.

The finding that relational abuse is perceived as more hurtful than other forms is of particular interest. What is surprising is that this is true of *both* boys and girls. The stereotype of boys being indifferent to the quality of their personal relations with peers, whilst girls are deeply concerned, is clearly false. It is true that girls are more concerned, but boys and girls, at least in their early adolescent years, are similar in finding relational abuse more hurtful than other kinds. Seeing someone threatening to break up one's friendship was the number one source of hurt for both boys and girls. We may also note that boys and girls of this age were also similar in finding physically intimate and intrusive sexual touching equally abhorrent.

The extent to which boys and girls reported experiencing negative treatments from peers in this study is clearly unacceptably high. Whilst comparisons with ill treatments in other contexts (for example, among adults in the workplace) are difficult to make, it seems unlikely that the scale of negative treatments in other contexts is so great. For example, no one has claimed that typically 'most young men' are each year deliberately being hit by their peers in the workplace, or 1 in 8 is being hit weekly, which are the figures derived from the self-reports of the adolescent boys in this study. It may be argued that adult abuse tends to be different in quality from that experienced by school children, being more subtle and indirect. But, as we have seen, much school bullying is also indirect and subtle and involves the particularly painful deliberate undermining of personal relationships.

Many schools are now responding positively to the problem of peer aggression. Unfortunately, however, there is still a tendency for schools to

regard physical aggression as by far their major concern. Physical aggression is, of course, not uncommon in schools and must be addressed, but it needs to be emphasised that other modes of ill treatment are more common and often as damaging, if not more damaging, to the well-being of children in schools. Schools are advised to discover for themselves what kinds of aggressive behaviours are being experienced by their students, using reliable assessment tools, for example, the Peer Relations Questionnaire (Rigby 1997b). Various methods have recently been developed to counter peer aggression in schools. These include the teaching of conflict resolution skills from an early age in the curriculum of schools; the use of educational drama as a method of teaching conflict-handling (Bagshaw & Halliday, 2000); the use of peer mediation in cases where aggression derives from unresolved disputes; the teaching of skills of assertiveness in cases where children can avoid being hurt by successfully defending themselves against aggressive peers; and the use of methods of changing the behaviour of aggressive children through developing skills of anger management. Greater empathy and concern for others who are hurt can be developed in children at school, for example by employing the Method of Shared Concern (Pikas, 1999; Rigby, 1996). Descriptions of a wide range of methods of intervention are described in Rigby (2001) and on website: www.education.unisa.edu.au/bullying/ □

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