Researchers have found it difficult to measure various forms of indirect aggression, such as exclusion from groups, because such behaviors are difficult to observe in field settings such as school playgrounds. This study examined gender and developmental differences in aggression, investigated across-gender aggression, and looked at teachers' estimates of students' aggression. An aggression scale was administered to students across four grades in two Catholic high schools and four Catholic primary schools. Subjects then estimated on a five-point scale how often they saw the listed aggressive behaviors among students in their own grade. Results confirmed earlier findings that there are gender and developmental differences in aggression. Boys used more physical aggression strategies than girls and older girls used more indirect forms of aggression than did boys. Boys tended to have higher levels of verbal aggression than girls. Across genders, boys estimated that they used less aggression toward girls but girls disagreed. Girls used more physical aggression against boys in only one grade level and girls always used less indirect aggression. Teachers estimated that both boys and girls had higher levels of aggression than levels estimated by the students. Teachers did not know as much about indirect within-gender aggression as did students. (RJM)
AGGRESSION IN SCHOOLS: GENDER AND DEVELOPMENTAL DIFFERENCES

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BACKGROUND

Violence in Australian schools is perceived to be on the increase and most of this violence is said to be caused by boys (eg see House of Representatives Standing Committee Sticks and Stones report, 1994). The traditional view is that males are the more aggressive sex and this view is supported by the figures on suspensions, bullying, violence and disruption across the Australian states (Sticks and Stones report). It may be, however, that we respond to the more obvious and openly disruptive and aggressive behaviours and overlook the more subtle forms of behavioural disturbance and aggression. Recent research (Bjorkqvist, Lagerspetz and Kaukiainen, 1992; Bjorkqvist, Osterman and Lagerspetz, 1994; Crick and Grotpeter, 1995; Cowan and Underwood, 1995) questioned this gender polarised view of aggression and suggested that gender differences may be qualitative rather than quantitative. This recent research unearthed forms of aggression more likely to be found in girls. Crick and Grotpeter called it relational aggression; Cowan and Underwood referred to it as social aggression; while Bjorkqvist et al. described it as indirect aggression. Common to all these notions is an attempt to harm others through damaging friendships or by exclusion from the peer group. Researchers have found it difficult to measure these forms of indirect aggression because they are not easy to elicit in laboratory situations and difficult to observe in field settings such as school playgrounds. Self nomination techniques will not work either because of the social undesirability of admitting to behaviours such as talking behind another's back or spreading malicious rumours. Peer nomination has recently proved to be a successful method of measuring indirect aggression and the current study adopted this methodology in a study of gender differences in aggression among students in South Australian schools.

AIMS

The aims of the study were: (1) to examine gender and developmental differences in aggression; (2) to investigate across gender aggression; and (3) to investigate teachers' estimates of students' aggression. This paper reports mainly on the first aim and aims 2 and 3 are considered only briefly.

METHOD

A modified version of the Direct and Indirect Aggression Scales (Bjorkqvist et al., 1994) was administered to students across four year levels (years 2, 6, 9 and 11) and their teachers in two Catholic high schools and four Catholic primary schools in working to lower middle class suburbs. The items on the scale were as follows:

1. Physical Aggression: hit, kick, trip, shove, take things, push, pull.
2. Direct Verbal Aggression: yell, insult, say they are going to hurt them, call them names, tease.
3. Indirect Aggression: shut out of the group, become friends with others as revenge, ignore, gossip, tell bad or false stories, plan secretly to bother them, say bad things behind their backs, say to others: let's not be with them, tell their secrets to others, write nasty notes about them, criticise their hair or clothing, try to get others to dislike them.

Subjects estimated on a five point scale how often they saw the listed aggressive behaviours among students in their own year level.
RESULTS AND DISCUSSION

Within Gender Aggression

(All measures of aggression are peer estimates).

Boys' Aggression Towards Boys Compared with Girls' Aggression Towards Girls

Physical Aggression (Figure 1)

At all four year levels, boys' physical aggression towards other boys was higher than girls' physical aggression towards other girls. These results support the notion that physical forms of aggression are discouraged among girls and they learn not to use them from an early age.

![Figure 1. Within gender physical aggression by boys compared with girls](image)

Figure 1. Within gender physical aggression by boys compared with girls

Verbal Aggression (Figure 2)

Figure 2 shows that at years 2, 6 and 11, boys' verbal aggression against boys was higher than girls' verbal aggression against girls. At year 9, there was no significant difference between the sexes. In previous research there have been inconsistent findings in regard to gender differences in verbal aggression.

![Figure 2. Within gender verbal aggression by boys compared with girls](image)

*p < .05  ****p < .0001

Figure 2. Within gender verbal aggression by boys compared with girls
There were no significant differences between indirect aggression of boys and girls at years 2 and 6. Significant differences appeared at year 9 and became larger at year 11, with girls' indirect aggression being higher than that of boys. Explanations for these gender differences include the different nature of girls' and boys' peer groups. Girls have smaller, more intimate friendship groups during the teenage years and this social pattern facilitates the use of manipulation of friendships among girls. Boys, however, form larger hierarchical groups which are not as conducive to indirect aggressive strategies. (Lagerspetz, Bjorkqvist and Peltonen, 1988; Thorne, 1993; Besag, 1989). The roles of socialisation and learning are also crucial to these gender differences in aggression.

**Figure 3.** Within gender indirect aggression by boys compared with girls

(Boys' Across Gender Aggression)

Boys estimated that their peers used less aggression at all year levels when interacting with girls. These results are partly explained by the lower over all social interactions between boys and girls. The results also support a chivalry and social expectations hypothesis (Frodi, MacAulay, and Thome, 1977; Eagly and Steffen, 1986). However, there is a caveat in acceptance of these results at face value. When girls were asked to estimate how much aggression their peers received from boys, they generally estimated a higher level of aggression (particularly physical) than boys estimated. Girls would say, therefore, that boys underestimated their amounts of across gender aggression. Certainly, the girls appeared to be feeling more aggression than the boys thought they were delivering.

**Girls' Across Gender Aggression**

Girls' peer estimated physical aggression either remained constant or increased (at year 6 only) when the target of girls' aggression changed from girls to boys. In contrast, girls' peer estimated indirect aggression was always less when the target group of girls' aggression was boys. Why might indirect aggression have consistently dropped? Indirect aggression is thought to be related to the nature of girls' peer groups. Girls socialise in smaller groups than do boys and the small size of girls' groups makes manipulation of the peer group an effective aggressive technique. Clearly, boys are rarely a part of these small friendship groups of girls (preferring to be in their larger same sex groups) so the peer group manipulation techniques are not relevant to girls' across gender aggression.
In addition to the lower levels of peer estimated indirect aggression, girls' peer estimated across
gender verbal aggression was also lower at two of the years levels (years 2 and 9). It was mentioned
above that girls don't find physical aggression effective. Now, in across gender encounters, it is seen
that girls often utilised less of their effective aggression strategies - verbal and indirect aggression.
It was also noted above that girls were feeling more aggression from boys than boys thought they
were delivering. This leads to a conclusion that girls are receiving aggression from boys and perhaps
not retaliating, at least not aggressively.

Teachers' Estimates of Students' Aggression

(Again the results are discussed but the actual data are not listed).

Teachers' Estimates of Aggression Compared with Students' Estimates

Teachers estimated very much more aggression by both boys and girls than students estimated. The
differences in estimates were more common between teachers and boys than between teachers and
girls and the differences were more common at year 9 level for both genders. This year 9 finding is
interesting in the light of the commonly held view about year 9, ie many high school teachers say
that year 9 is the most difficult year group in terms of behaviour and disruption.

The finding that teachers estimated higher levels of aggression by boys than boys estimated is also
revealing when this result is put together with the earlier finding that girls thought that boys may
be under-estimating their across gender aggression. This same evidence leads to the posing of the
question: what about the girls? Do they exhibit troublesome behaviour that is missed by the
teachers. In the context of this current research, do teachers miss the indirect aggression often
engaged in by the girls?

Do Teachers Notice Indirect Aggression?

There was some evidence to support the notion that teachers may miss noticing indirect aggression,
especially that of girls. Although this evidence was not overwhelming, it does signal an important
implication. It has been mentioned that boys' more direct aggression is noticeable and teachers strive
to limit it to avoid, in particular, physical injury to students. However, how much notice is taken of
the psychological harm that results when a girl is ostracised from one group and is prevented by
peers from joining another group? How often does this sort of scenario lead to a child truanting,
transferring schools or leaving school altogether? The evidence from the present study is that
teachers often may not know about this sort of aggression. Surely this is an area for school policy and
action to increase consciousness, within school communities, of social manipulation as a form of
aggression as a first step toward reducing it.

CONCLUSION

This study confirmed recent research findings that there are gender and developmental differences in
aggression among students. More specifically, boys used more physical aggression strategies than
girls and older girls used more indirect forms of aggression than boys. In the present study, boys
generally tended to have higher levels of verbal aggression than girls. In across gender aggression,
boys estimated that they used less aggression toward girls but girls were not so sure about that. Girls
used more across gender physical aggression at only one year level and always used less indirect
aggression, perhaps believing such strategies would not be effective against boys. Finally, teachers
estimated that both boys and girls (but especially boys) had higher levels of aggression than levels
estimated by students, particularly at Year 9. Teachers, too, didn't know about as much indirect
within gender aggression as students, especially girls, knew about. It was suggested that this last
finding was quite worrying in relation to the welfare of the girl victims of much of this indirect aggression.

It would have been useful to have been able to break the teacher respondents into their two genders to compare male and female teacher estimates of aggression. The numbers in the teacher samples were too small to allow this. It would also be useful in future to conduct similar studies in schools of different socio-economic background to determine the influence of social class as a variable in relation to gender differences in aggression. Above all, future research is needed to examine the impact of aggression on the lives of the student victims. In particular, what happens to the girl victims of indirect aggression? We need to get girls' own stories so that we can show the human side behind the data in this study. Hopefully, in this way, the significance of indirect aggression will be highlighted and intervention aimed at prevention will follow.

REFERENCES


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