

Archived at the Flinders Academic Commons

<http://dspace.flinders.edu.au/dspace/>

This is the publisher's copyrighted version of this article.

The original can be found at: <http://iej.cjb.net>

# Peer Victimization and Conflict Resolution Among Adolescent Girls in a Single-sex South Australian School

---

**Vennessa H. James**

The Flinders University, School of Education *vanessa.james@flinders.edu.au*

**Laurence D. Owens**

The Flinders University, School of Education *laurence.owens@flinders.edu.au*

*This study investigated the peer victimisation and conflict resolution experiences of adolescent girls attending a single-sex school. A modified version of the Direct and Indirect Aggression Scales (DIAS, Björkqvist, Österman, and Kaukiainen, 1992) and conflict resolution scales, drawn particularly from the work of Feldman and Gowen (1998), were administered to 325 students in Years 8 to 11. Girls in all year levels experienced more indirect and verbal than physical victimisation, and older girls were subject to more indirect and verbally aggressive behaviours than younger girls. Non-victims used less overt anger and avoidance than victims. Collectively, the girls used more compromise, avoidance, social support and obliging than overt anger. The results advance our understanding of the behaviours of adolescent girls in conflict with each other in a single-sex setting.*

Victimisation, aggression, conflict resolution, adolescent, girls

## INTRODUCTION

For a long time it was thought that males were the more aggressive sex (Maccoby and Jacklin, 1974). Past research, however, failed to include behaviours other than direct physical or verbal, specify the context (e.g., school, work, groups, or individuals) and type of encounter (e.g., cross-sex or same-sex), and used mostly observational methods that favoured the recognition of physical aggression salient to boys (Björkqvist, Österman, and Lagerspetz, 1994). The aggressive behaviours that exist outside the traditional direct physical and verbal forms are now widely recognised (e.g., Cairns, Perrin, and Cairns, 1985; Crick, 1995; Owens, 1996; Galen and Underwood, 1997; Lagerspetz, Björkqvist, and Peltonen, 1988); however, a number of terms including indirect, relational and social, have been coined to accommodate slightly different perceptions of them (for recent debate see Archer, 2001; Björkqvist, 2001; Underwood, Galen, and Paquette, 2001a; Underwood, Galen, and Paquette, 2001b). The term indirect aggression has been adopted here to encompass distinctly covert behaviours (e.g., spreading rumours), as well as behaviours considered more direct (e.g., dirty looks), exhibited in ways that may or may not involve social manipulation. An important characteristic of all the behaviours recognised as indirectly aggressive in the current study are their “covered” (Björkqvist, Österman, and Kaukiainen, 1992) nature whereby they are masked to not appear aggressive (e.g. gossip regarding a so called true fact) or can be explained away as not being aggressive (e.g., a dirty look could be explained as having been imagined or misdirected). With the recognition of indirectly aggressive behaviours, research reveals that adolescent girls use more indirect and verbal than physical aggression in same-sex (Björkqvist, Lagerspetz, and Kaukiainen, 1992; Lagerspetz and Björkqvist, 1994) and mixed-sex interactions (Russell and Owens, 1999) in co-educational schools. It is therefore the nature of aggression that differs between the genders, rather than aggressiveness being a predominantly male trait.

Although there is a large pool of conflict resolution research, surprisingly few studies have combined adolescent victimisation in educational settings with that of overcoming conflict arising from problems such as victimisation (for exceptions see Lindeman, HaraKka, and Keltikangas-Jarvinen, 1997; and Österman et al., 1997). Conflict is generally conceptualised as at least one incident of mutual opposition and so its resolution requires actions that terminate the oppositional exchange (Collins and Laursen, 1992; Jensen-Campbell, Graziano, and Hair, 1996). The strategies employed to overcome conflict commonly encompass the categories of overt anger, compromise, avoidance, social support, obliging and distraction (Bird and Harris, 1990; Feldman and Gowen, 1998; Gross and Guerrero, 2000; Maccoby, 1988, 1990). The current study aimed to investigate the links between victimisation and conflict resolution strategies.

Without a male audience, girls attending a single-sex girls' school may behave differently toward each other than if male peers were present. In the absence of boys, it may be that girls feel less restrained by gender role expectations and utilise more overt forms of aggression. However, research by Watson (1997) suggests that all-girls schools may strengthen female gendered norms, which oppose overt displays of aggression. Similarly, Eagly and Wood (1991) argued that the presence of an audience, which is perceived to support social norms, is likely to affect an individual's behaviour in favour of conforming to those norms. It is possible then, that girls attending a single-sex school may behave differently toward one another than those in a coeducational environment. The current research investigated the forms of aggression and conflict resolution used by girls in a single-sex school.

The power assertion associated with overt anger often aggravates conflicts and tends to destroy relationships. Resolving conflicts using compromise, however, facilitates the sharing of power needed to preserve the interconnectedness within voluntary relationships (Jensen-Campbell et al., 1996; Leyva and Furth, 1986). Accordingly, compromise has been found across both adolescent peer romantic relationships (Feldman and Gowen, 1998; Laursen, Finkelstein, and Betts, 2001) and same- and mixed-gender specific friendships to be the preferred conflict resolution strategy (Jensen-Campbell et al., 1996; Laursen et al., 2001; Österman et al., 1997; Owens and Daly, 2002). Avoidance, social support, obliging and distraction, like compromise, may serve partly to meet other people's needs in conflict situations. Consequently, they are more constructive (Jensen-Campbell et al., 1996) and so their use is heightened when maintaining harmonious relationships is important, such as in that of girls' peer friendships (Feldman and Gowen, 1998). They also meet the peaceful female gender-role convention in comparison to overtly angry responses (Alson and Romer, 1996).

Avoidance may be likened to some forms of indirect aggression (e.g., ignoring) which adolescent girls are reputed to use in their deliberate attempts to manipulate peer relationships and inflict pain (Owens, Shute, and Slee, 2000). Adolescent girls are also likely to use avoidance strategies (Feldman, Fisher, Ransom, and Dimiceli, 1995) as well as seek social support (Bird and Harris, 1990; Feldman et al., 1995) when involved in family problems. Obliging behaviours, like putting others' needs ahead of their own (Alson and Romer, 1996; Laursen et al., 2001), and seeking the support of friends (i.e., social support) (Österman et al., 1997; Stark, Spirito, Williams, and Guevremont, 1989) are also considered typical conflict resolution strategies for females. They are consistent with female gender-role expectations of showing compassion, kindness and providing help (Eagly and Crowley, 1986), e.g., when acting as go-betweens in reconciling conflicting parties (Nilan, 1991). However, because distraction is not associated with the emotional expression and the connectedness distinctive of female friendships, it is more attributable to males who have a preference for autonomy in their relationships (Feldman and Gowen, 1998; Lagerspetz and Björkqvist, 1994). Consequently, to resolve conflicts within same-sex peer relationships,

girls' may use more compromise, avoidance, social support and obliging, and less overt anger and distraction.

Research by Owens and Daly (2002) in a co-educational secondary school revealed that non-victims used more compromise than victims of same-sex aggression, while victims used more overt anger, avoidance and distraction. Similarly, in a study by Jensen-Campbell et al. (1996), pre-adolescents who reported high levels of agreeableness when describing themselves (using personality and self-concept scales) in response to hypothetical conflict scenarios were found to endorse compromise. In contrast, those found to be less agreeable displayed an acceptability of power assertion. The preference of compromise by non-victims and those more agreeable in conflict situations may again support the notion that compromise is more successful at resolving adolescent peer conflicts than overt anger, which may aggravate conflict. It may also be indicative of more mature social reasoning (i.e., higher social intelligence) used to prevent conflicts before they become overt (Österman et al., 1997). Like compromise, avoidance and distraction may partly meet other people's needs. However, they may also be a consequence of victims not knowing what to do (i.e., lacking the social intelligence) to resolve conflicts. Consequently, as for overt anger, the use of avoidance or distraction may mean that conflict is ongoing rather than resolved, and so victims may be prone to further victimisation.

Many forms of indirectly aggressive behaviours require both the social skills and the cognitive capacity, or social intelligence, to predict social outcomes. Research supports this developmental concept with older adolescent girls using, and so also experiencing, more indirect aggression than younger girls in co-educational contexts (Björkqvist, Lagerspetz et al., 1992; Lagerspetz and Björkqvist, 1994; Owens, 1996). An age-related decline in power assertion (i.e., overt anger) during adolescence also gives way to more complex, adult-like resolution techniques (Collins and Laursen, 1992). Leyva and Furth (1986) found that, in response to hypothetical conversation dialogue, constructive compromise increased with the age of both adolescent boys and girls. Feldman et al. (1995) also found that compromise and social support were most closely correlated with older than younger adolescents in their romantic relationships. Lindeman et al. (1997) revealed particularly that, with age, adolescent girls use more withdrawal type strategies like avoidance. Consequently, developmental trends suggest that the use of compromise, avoidance and social support is likely to be higher for older than younger adolescent girls.

To address the issues in the preceding discussion the following hypotheses were investigated

- a) girls experience significantly more indirect and verbal than physical victimisation;
- b) girls use significantly more compromise, avoidance, social support and obliging than overt anger and distraction;
- c) non-victims use more compromise and less overt anger, avoidance and distraction than victims;
- d) older girls experience significantly more indirect aggression than younger girls; and
- e) older girls use significantly more compromise, avoidance and social support than younger girls.

## METHOD

### Participants and Procedure

A total of 325 students in year levels 8 to 11 from a single middle-class, all-girls school in metropolitan Adelaide, South Australia, participated in the study (with 140, 54, 69 and 62 participants representing the respective year levels). The responses from 11 students in Year 8 and one student in Year 9 were excluded because they consisted entirely of missing or zero values. The average age of the participants by year level was 13.0, 14.1, 15.1 and 15.7 years old

respectively. All students had parental consent to participate and their confidentiality and anonymity were preserved.

Two self-report pencil-and-paper questionnaires using a five-point Likert scale were employed. Self-report may be considered problematic because some strategies have a greater social acceptance than others, and so some behaviours are less likely to be revealed than others. Accordingly, research has failed to find significant correlations between girls' self- and peer-estimated reports of indirect aggression (Björkqvist, Lagerspetz et al., 1992; Lagerspetz et al., 1988; Laursen et al., 2001). However, self-reporting overcomes ethical concerns associated with asking students to nominate and estimate the aggressiveness of their peers. In addition, given that the participants would otherwise need to infer how their named peers resolved conflict, or make inferences through observational techniques whereby some conflict resolution strategies like avoidance (and some indirectly aggressive behaviours) may not be clearly observable (Bryant, 1992), self-estimation was considered to be a more appropriate option. The use of self-reporting is further supported by its development and application in other aggression (e.g., Olweus, 1996; Rigby and Slee, 1995) and conflict resolution research (e.g., Charlton, 2001; Feldman and Gowen, 1998).

### The Victimization Instrument

The frequency that adolescent girls experienced peer victimisation within the current year and school context was measured using a modified version of the Direct and Indirect Aggression Scales (DIAS) originally developed by Björkqvist, Österman et al. (1992). The current modifications included the rewording of items to allow self-estimation and the merging of similar items to allow the addition of others that reflect current emerging issues, such as "receiving nasty anonymous electronic messages from other students". Presented in a random sequence to the participants, 18 items represented the scales of direct physical (e.g., hitting), direct verbal (e.g., yelling), and indirect aggressive behaviours (e.g., spreading rumours). Table 1 specifies the items delineating the three scales and reveals their reliability assessment using Cronbach's alpha compared to those reported by Björkqvist, Österman et al. (1992). The lower alphas in the present study may be due to the instrument's adaptation as a self-estimation tool and the modifications outlined above.

**Table 1. Cronbach's Alpha for the Victimization Questionnaire Scales in the Current Study and Björkqvist, Österman et al. (1992)**

Scales	The current study		Björkqvist et al. (1992)
	Alpha ( $\alpha$ )	*Scale Items	Alpha ( $\alpha$ )
Physical	0.68	being hit; being kicked; being tripped; being pushed or shoved; having things taken from you	0.93
Indirect	0.84	having bad or false things said behind your back (e.g., rumours); being left out or excluded from the group; having nasty notes written or spread about you; receiving nasty anonymous electronic messages from other students (e.g., mobile phone text messages or emails); having your secrets told to other people (breaking confidences); receiving prank telephone calls (from other students); being ignored; being the object of "daggers" or dirty looks	0.92
Verbal	0.81	being yelled at; being called names; being insulted (e.g., about your clothing or appearance); being teased; being threatened	0.93

Note. \*scale items are modified from those in Björkqvist, Österman et al. (1992) study.

## The Conflict Resolution Instrument

A 28-item questionnaire based on Feldman and Gowen (1998) and Charlton (2001) and adapted from Rands et al. (1981) and Straus (1979, cited in Feldman and Gowen, 1998), was employed to estimate the frequency with which the participants used the conflict resolution strategies with their school peers in the current year. The items represented six different scales: overt anger, compromise, avoidance, social support, obliging and distraction, and were administered in a random order. The violence scale of the original questionnaire was removed due to its overlap with the direct physical and verbal aggression items in the victimisation questionnaire. A three-tactic obliging scale was incorporated based on behaviours outlined by Gross and Guerrero (2000) and Maccoby (1988, 1990) and its inclusion by Charlton (2001). In an attempt to improve the reliability of the social support scale, the suggestion by Charlton (2001, p. 62) to include the item “seeking help from a friend” saw the incorporation of four new items: “bring in or try to bring in a friend”, “talk to a friend”, “talk to a parent” and “talk to a teacher”. Also, as recommended by Charlton (2001) to improve reliability, the item “distract yourself or the other person through entertainment or relaxation” was included in the distraction scale. Table 2 locates each item into their respective scales and reports the Cronbach’s alpha reliability for each scale in the present study along side those reported in Feldman and Gowen (1998) and Charlton (2001). The new items incorporated in the social support and distraction scales may explain their greatly improved reliabilities.

**Table 2. Cronbach’s Alpha for the Conflict Resolution Questionnaire Scales in the Current Study, Feldman and Gowen (1998), and Charlton (2001)**

Scales	The current study		Feldman and Gowan (1998)	Charlton (2001)
	Alpha ( $\alpha$ )	Scale Items	Alpha ( $\alpha$ )	Alpha ( $\alpha$ )
Overt anger	0.85	get angry and yell; hurt other person’s feelings; get sarcastic; get angry and walk away; make other person feel bad; get angrier the more I talk; stay angry a long time	0.84	0.93
Compromise	0.81	try to reason; listen and try to understand; try to work out a compromise; try to smooth things over	0.74	0.82
Avoidance	0.64	clam up and hold my feelings inside; walk away and discuss later; get cool and distant / give cold shoulder; try to avoid talking about it	0.67	0.65
Social support	0.72	talk to a brother or sister; bring in or try to bring in a friend; talk to a friend; talk to a parent; bring in or try to bring someone (to help); talk to a teacher	0.18	0.29
Obliging	0.66	put the other person’s needs first; apologise to other person; give in to what other person wants	n/a	0.57
Distraction	0.61	try to be funny and make light of it; tell myself it is not important; watch TV or play video games; distract yourself or the other person through entertainment or relaxation	0.26	0.33

Note. Italicised items are new additions to the scales used by Feldman and Gowen (1998) and Charlton (2001).

## Determination of Victim Status

A procedure derived from Crick (1995) and Crick and Grotpeter (1995) to identify relationally aggressive children from non-relationally aggressive children was used to identify victims from non-victims. Total victimisation scores were obtained by calculating the mean of all 18 items on the victimisation scale. The victim group included those participants whose total mean victimisation score was at least one standard deviation above the overall sample mean. The rest were classified as non-victims.

## RESULTS

The means and standard deviations for each victimisation and conflict resolution scale, as calculated from the 0 (never) to 4 (very often) Likert scale responses, are reported by year level in Tables 3 and 4. Although data collected using Likert scales are “almost always analysed by parametric tests” (Harris, 1998, p. 479), the data from this study violated the assumptions of parametric testing. The data were not normally distributed and the variances of each scale were not similar. Consequently, non-parametric testing was employed.

Related samples were analysed using the Friedman test followed by Wilcoxon post-hoc analyses. The Kruskal-Wallis test was employed for independent samples and the Mann-Whitney U test used for post-hoc analyses. The Friedman test is favourably compared to the most powerful equivalent parametric test, the *F* test, and likewise “the Kruskal-Wallis test seems to be the most efficient of the non-parametric tests for *k* independent samples” (Siegel, 1956, p. 194). The Mann-Whitney U test is “an excellent alternative to the *t* test” (Siegel, 1956, p. 126) because its power efficiency is comparably high, as is the power efficiency of the Wilcoxon test, when the assumptions for parametric testing cannot be met.

**Table 3. Means and Standard Deviations for Victimization Scales by Year Level**

Year Level	Physical	Verbal	Indirect
	M (SD)	M (SD)	M (SD)
8	0.24 (0.32)	0.40 (0.49)	0.49 (0.51)
9	0.25 (0.35)	0.60 (0.52)	0.72 (0.53)
10	0.27 (0.42)	0.71 (0.67)	0.68 (0.56)
11	0.25 (0.39)	0.67 (0.75)	0.79 (0.70)

Note: N=312

**Table 4. Means and Standard Deviations for Conflict Resolution Scales by Year Level**

Year Level	Overt Anger	Compromise	Avoidance	Social Support	Obliging	Distraction
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
8	0.93 (0.73)	2.00 (1.05)	1.33 (0.76)	1.38 (0.80)	1.56 (0.93)	1.41 (0.92)
9	1.28 (0.71)	2.00 (0.21)	1.42 (0.76)	1.33 (0.71)	1.62 (0.66)	1.55 (0.82)
10	1.31 (0.90)	1.99 (0.84)	1.49 (0.84)	1.39 (0.74)	1.66 (0.85)	1.69 (0.79)
11	1.40 (0.78)	1.96 (0.84)	1.71 (0.84)	1.33 (0.72)	1.64 (0.86)	1.63 (0.68)

Note: N=313

## Overall Differences

### ***Hypothesis 1: Girls experience more Indirect and Verbal than Physical Victimization***

Friedman analysis revealed an overall significant difference between the victimisation scales ( $\chi^2(2) = 187.1, p < 0.05$ ). Bonferroni-corrected Wilcoxon post-hoc analyses confirmed that the girls experienced significantly more Indirect ( $N = 312$ ) ( $z$ -score = -11.8,  $p < 0.017$ ) and Verbal ( $z$ -score

= -10.1,  $p < 0.017$ ) than Physical victimisation. The post-hoc analyses also revealed that significantly more Indirect than Verbal victimisation occurred ( $z$ -score = -3.49,  $p < 0.017$ ).

***Hypothesis 2: Girls use more Compromise, Avoidance, Social Support and Obliging, than Overt Anger and Distraction***

A Friedman analysis performed on the six conflict resolution scales yielded a significant result ( $\chi^2(5) = 217.8$ ,  $p < 0.05$ ). Bonferroni-corrected Wilcoxon post-hoc analyses, reported in Table 5, confirmed the prediction that girls use significantly more Compromise, Avoidance, Social Support and Obliging than Overt Anger, and significantly more Compromise than Distraction. However, contrary to the hypothesis, there was no significant difference between Avoidance or Obliging and Distraction, and there was significantly less Social Support used than Distraction.

**Table 5. Results of Wilcoxon Post-Hoc Analyses for Conflict Resolution Scale Interactions**

Comparison	Z-score	Significance
Overt Anger with		
Compromise	-10.67	0.000
Avoidance	-6.68	0.000
Social Support	-4.16	0.001
Obliging	-7.08	0.000
Distraction with		
Compromise	-7.76	0.000
Avoidance	-1.82	0.069
Social Support	-3.45	0.001
Obliging	-1.35	0.176

Note. N = 313

***Hypothesis 3: Non-victims use more Compromise and less Overt Anger, Avoidance and Distraction than Victims***

Due to small sample sizes for the Victim groups by year level, Victims and Non-victims from each year level were combined (see Table 6). The Mann-Whitney U test, confirmed that Non-victims used less Overt Anger and Avoidance than Victims ( $z$ -score<sub>overt anger</sub> = -5.95,  $z$ -score<sub>avoidance</sub> = -4.03,  $p < 0.05$ ). However, there was no significant difference between the Victim and Non-victim groups' use of Compromise or Distraction. The means and standard deviations are reported in Table 7.

**Table 6. Sample Size of the Non-Victim and Victim Group by Year Level**

Group	Year Level				Total
	8	9	10	11	
Non- Victims	121	41	58	49	269
Victims	8	11	11	13	43

**Table 7. Means and Standard Deviations of Non-Victims and Victims for Conflict Resolution Strategies**

Conflict Resolution Strategy	Non-Victims (n = 269)		Victims (n = 43)	
	M	(SD)	M	(SD)
Overt anger	1.05a	(0.73)	1.90b	(0.86)
Compromise	1.99	(0.95)	2.04	(0.71)
Avoidance	1.38a	(0.79)	1.91b	(0.70)
Distraction	1.49	(0.84)	1.81	(0.77)

Note. Different superscripts represent a significant difference between the means a < b ( $p < .05$ ).



### Age-Related Differences

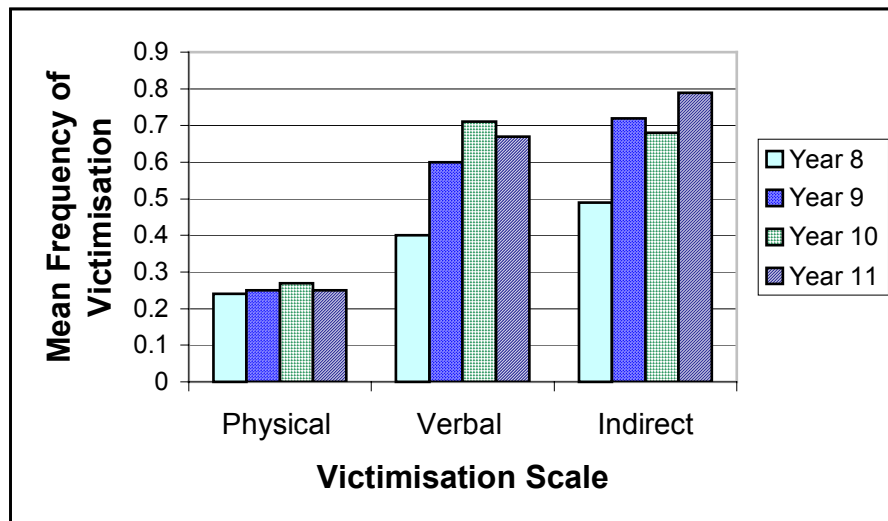
#### ***Hypothesis 4: Older Girls experience more Indirect Victimisation than Younger Girls***

Kruskal-Wallis analyses yielded significant differences between the year levels for Indirect victimisation ( $\chi^2(3) = 17.1, p < 0.001$ ), and Verbal victimisation ( $\chi^2(3) = 17.4, p < 0.001$ ). Mann-Whitney U post-hoc analyses (Bonferroni-corrected  $p < 0.008$ ), confirmed the hypothesis (see Table 8 and Figure 1). Year 9, 10 and 11 girls experienced significantly more Indirect victimisation in comparison to those in Year 8. In addition, Year 9, 10 and 11 girls experienced significantly more Verbal aggression than girls in Year 8.

**Table 8. Mann-Whitney U Test Post-hoc Results (z-scores) From Year-Level Comparisons of the Verbal and Indirect Victimisation Scales**

Scale	Comparison					
	Yr8/Yr9	Yr8/Yr10	Yr8/Yr11	Yr9/Yr10	Yr9/Yr11	Yr10/Yr11
Indirect	-3.07**	-2.78**	-3.24*	-0.42	-0.23	-0.58
Verbal	-2.81**	-3.63***	-2.61***	-0.68	-0.18	-0.79

Note. \* $p < 0.01$ , \*\* $p < 0.005$ , \*\*\* $p < 0.001$ .



Note. Scale: 0 = never to 4 = very often

**Figure 1. Self estimates of victimisation experienced by year level.**

#### ***Hypothesis 5: Older Girls use more Compromise, Avoidance and Social Support than Younger Girls***

Kruskal-Wallis analyses revealed that older girls (i.e., those in later year levels) did not use significantly more Compromise, Avoidance or Social Support than younger girls.

### DISCUSSION

Using a modified version of the Direct and Indirect Aggression Scales (DIAS) originally developed by Björkqvist, Österman et al. (1992) and conflict resolution scales, drawn particularly from the work of Feldman and Gowen (1998), the current study investigated adolescent girls' peer victimisation and conflict resolution experiences in a middle-class, single-sex school in metropolitan Adelaide, South Australia. Consistent with past research in co-educational settings (Owens, 1996; Russell and Owens, 1999), girls in year levels 8 to 11 experienced more indirect

and verbal than physical victimisation. Also corresponding with previous research (Björkqvist, Lagerspetz et al., 1992; Lagerspetz and Björkqvist, 1994; Owens, 1996), as the age of the adolescent girls increased, so too did their experience of indirect victimising behaviours. Unlike past findings in secondary school co-educational settings however, older girls were also privy to more direct verbal victimisation than younger girls.

The greater prevalence of indirect and verbal victimisation pertains to physical aggression being socially unacceptable for females (Lagerspetz et al., 1988). The importance adolescent girls place on close, intimate peer relationships (Cairns et al., 1985; Adler, Kless, and Adler, 1992) offers an ideal opportunity to inflict pain through the use of the indirect strategies by which girls can mask their aggressive intentions and comply with the social etiquette of the non-aggressive female (Alson and Romer, 1996; Björkqvist, Lagerspetz et al., 1992; Lagerspetz et al., 1988). Using indirectly aggressive behaviours that conform to feminine social expectations may be of even greater importance without a male audience (Eagly and Wood, 1991; Watson, 1997). The social skills necessary for indirect victimisation are found to increase with age, which explains the greater reporting of indirect victimisation by older adolescent girls (Björkqvist, Lagerspetz et al., 1992; Lagerspetz and Björkqvist, 1994; Owens, 1996).

More verbal aggression by older girls may be unique to the particular specific single-sex school context of the current study. In addition to using effective and socially acceptable indirect behaviours, perhaps in the absence of boys, older girls (i.e., Years 9 to 11) may feel more comfortable with openly assertive, direct verbal displays of aggression in single-sex as opposed to co-educational contexts. Accordingly, the younger (i.e., Year 8), and hence newer girls to the single-sex school may perceive themselves as having less power and social status. As a result, they may suppress their use of direct, verbally aggressive behaviours as compared to the older adolescent girls who are more familiar with, and dominate the school environment. Alternatively, perhaps younger girls felt more embarrassment or shame in admitting to experiencing socially discouraged overt displays of aggression, or had a greater desire to protect their self-pride and deny being victims than did the older girls.

Overall, compromise was favoured in preference to overtly angry responses and distraction. This may be attributed to adolescent girls' interest in maintaining small, intimate peer relationships where power is shared, while conforming to the harmonious social expectations of females (Cairns et al., 1985; Kaukiainen et al., 2001). However, the results did not show the predicted difference in the use of avoidance, social support, or obliging and distraction strategies. In fact, social support was employed less than distraction.

Although avoidance may be likened to some forms of indirect aggression (Owens et al., 2000), and so is expected to be used more than distraction by adolescent girls, perhaps the dismissive potential of avoidance means that adolescent girls are as unsatisfied with it as they are with the disconnection from emotional expression characteristic of distraction behaviours (Feldman and Gowen, 1998). Likewise, the nature of obliging behaviours and giving in to others' needs may do little to affirm mutually adolescent girls' all-important relational bonds. By obliging, an equal exchange of ideas and the give-and-take involved when compromising would not occur. Consequently, the resulting connectedness is more likely to be one-sided on behalf of the obliged.

An explanation for the unexpected lesser use of social support compared to distraction may be found in unpublished research findings of the present study (James, 2002). In a letter writing exercise, a sample of 39 15-year old girls who had completed the victimisation and conflict resolution questionnaires, reported that although some girls sought peer support as a response to conflict, many were also concerned about the pain of potential backstabbing. The threat of peers

using disclosed information about a conflict against them at a later time might be the reason that the girls reported using less social support than distraction when resolving peer conflicts.

Contrary to the predicted outcome, the older and younger adolescent girls used compromise, avoidance and social support in similar amounts. Although Leyva and Furth (1986) found constructive compromise to increase with age, the largest increase was evident between the ages of 11 and 13 years. As the youngest age group in the current study was on average 13 years old, it is possible that the expected significant increase in constructive compromise was not evident due to comparisons being made with girls of older ages. Consistent with Leyva and Furth's (1986) findings for compromise, Österman et al. (1997) found that overall conflict resolution peaked at age 11 years. Again, because this peak was at a lower age than that measured in the current study, it provides a possible explanation for finding out that no differences were evident between older and younger girls in the use of compromise, avoidance or social support. However, this is inconsistent with Lindeman et al.'s (1997) research where, in mixed-sex relationships, girls in later adolescence used more withdrawal strategies than in pre- or mid-adolescence. Further research is necessary to confirm if the current findings are characteristic of adolescent girls' conflict resolution behaviour only within the context of a single-sex school.

As predicted, results of the current study confirmed that non-victims used less overt anger and avoidance compared to victims (Owens and Daly, 2002). However, there was no difference in non-victims' and victims' use of compromise or distraction. The significantly lower use of overt anger and avoidance by non-victims than victims suggests that overt anger and avoidance are not preferred strategies for amicably resolving conflicts for non-victimised adolescent girls. Power assertion, like that associated with overt anger, is known to often aggravate conflict, while compromise facilitates the sharing of power needed to preserve the interconnectedness within girls' peer friendships (Jensen-Campbell et al., 1996; Leyva and Furth, 1986). The similar levels of compromise estimated by victims and non-victims may be because all the girls try initially to resolve conflict using reasoning approaches. However, after unsuccessful attempts at compromise, the victims resort more quickly to using overt anger. This may be indicative of victims' less mature social reasoning, or a poorer understanding of how to resolve conflicts using more sustained attempts at socially acceptable strategies such as compromise. The similar frequency of distraction strategies by victims and non-victims is more difficult to explain. It contradicts research by Owens and Daly (2002) who found that victims in a co-educational school used more distraction than non-victims. It is not logical in the current study that victimised girl's use more avoidance but **not** more distraction during peer conflict resolution.

### **Concluding Comments**

Adolescent girls' peer victimisation experiences and conflict resolution strategies in a single-sex school were consistent with the expectations that girls hide their aggressive intentions with indirect behaviours and favour conflict resolution techniques that preserve their intimate friendships. The present results indicate the possibility that, in the single-sex context, girls are more comfortable using overt verbal aggression in trying to resolve conflicts. There were some surprising results including: girls preferring distraction to social support, and victims' usage of compromise and distraction. Although it was not the purpose of this study to explore the implications of the findings for teachers and the broader school community, it does provide awareness that victimisation and conflict resolution may be different in all girl contexts. In contributing toward an understanding these phenomena in a single-sex environment, the findings are available for further comparison to similar and co-educational secondary settings. The conclusions of this study are tentative because the sample comes from only one school. In addition, while the choice of self report is defended, this study may be endangered by shared method variance - by employing the same methods to measure both predictor and outcome

variables, the associations between victim status and the conflict resolution tactics may be inflated. The results found in the present study are worth testing across a number of schools representing different socio-economic groups using a range of data collection procedures.

## REFERENCES

- Adler, P. A., Kless, S. J., and Adler, P. (1992). Socialization to gender roles: popularity among elementary school boys and girls. *Sociology of Education*, 65, 169-187.
- Alson, S., and Romer, N. (1996). Girls and school conflict resolution. *Reclaiming Children and Youth*, 5(2), 87-89.
- Archer, J. (2001). A strategic approach to aggression. *Social Development*, 10(2), 267-271.
- Bird, G. W., and Harris, R. L. (1990). A comparison of role strain and coping strategies by gender and family structure among early adolescents. *Journal of Early Adolescence*, 10(2), 141-158.
- Björkqvist, K. (2001). Different names, same issue. *Social Development*, 10(2), 272-274.
- Björkqvist, K., Lagerspetz, K. M. J., and Kaukiainen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behaviour*, 18, 117-127.
- Björkqvist, K., Österman, K., and Kaukiainen, A. (1992). The development of direct and indirect aggressive strategies in males and females. In K. Björkqvist and P. Niemela (Eds.), *Of Mice and Women: Aspects of Female Aggression* (pp. 51-64.). San Diego, CA: Academic Press.
- Björkqvist, K., Österman, K., and Lagerspetz, K. M. J. (1994). Sex differences in covert aggression among adults. *Aggressive Behaviour*, 20, 27-33.
- Bryant, B. K. (1992). Conflict resolution strategies in relation to children's peer relations. *Journal of Applied Developmental Psychology*, 13, 35-50.
- Cairns, R. B., Perrin, J. E., and Cairns, B. D. (1985). Social structure and social cognition in early adolescence: Affiliative patterns. *Journal of Early Adolescence*, 5(3), 339-355.
- Charlton, K. (2001). Patterns of conflict resolution in adolescent peer relationships. Unpublished Honours Thesis, Flinders University, Adelaide, Australia.
- Collins, W. A., and Laursen, B. (1992). Conflict and relationships during adolescence. In C. U. Shantz and W. W. Hartup (Eds.), *Conflict in child and adolescent development* (pp. 216-241). Cambridge: Cambridge University Press.
- Crick, N., and Grotpeter, J. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development*, 66, 710-722.
- Crick, N. R. (1995). Relational aggression: The role of intent attributions, feelings of distress, and provocation type. *Development and Psychopathology*, 7, 313-322.
- Eagly, A., and Wood, W. (1991). Explaining sex differences in social behaviour: A meta-analytic perspective. *Personality and Social Psychology Bulletin*, 17, 306-315.
- Eagly, A. H., and Crowley, M. (1986). Gender and helping behavior: A meta-analytic review of the social psychological literature. *Psychological Bulletin*, 100(3), 283-308.
- Feldman, S., and Gowen, C. (1998). Conflict negotiation tactics in romantic relationships in high school students. *Journal of Youth and Adolescence*, 27(6), 691-705.

- Feldman, S. S., Fisher, L., Ransom, D. C., and Dimiceli, S. (1995). Is "What is good for the goose good for the gander?" Sex differences in relations between adolescent coping and adult adaptation. *Journal of Research on Adolescence*, 5(3), 333-359.
- Galen, B. R., and Underwood, M. K. (1997). A developmental investigation of social aggression among children. *Development and Psychopathology*, 33(4), 589-600.
- Gross, M. A., and Guerrero, L. K. (2000). Managing conflict appropriately and effectively: An application of the competence model to Rahim's organisational conflict styles. *International Journal of Conflict Management*, 11(3), 200-226.
- Harris, M. B. (1998). *Basic statistics for behavioural science research* (2nd ed.). Needham Heights: Allyn and Bacon.
- James, V. H. (2002). *Adolescent peer victimisation and conflict resolution in an all-girls school*. Unpublished Honours Thesis, Flinders University, Adelaide, Australia.
- Jensen-Campbell, L. A., Graziano, W. G., and Hair, E. C. (1996). Personality and relationships as moderators of interpersonal conflict in adolescence. *Merrill-Palmer Quarterly*, 42(1), 148-164.
- Kaukiainen, A., Salmivalli, C., Björkqvist, K., Österman, K., Lahtinen, A., Kostamo, A., and Lagerspetz, K. (2001). Overt and covert aggression in work settings in relation to the subjective well-being of employees. *Aggressive Behaviour*, 27, 360-371.
- Lagerspetz, K., Björkqvist, K., and Peltonen, T. (1988). Is indirect aggression typical of females? Gender differences in aggressiveness in 11-to 12-year-old children. *Aggressive Behaviour*, 14, 403-414.
- Lagerspetz, K. M. J., and Björkqvist, K. (1994). Indirect aggression in boys and girls. In R. Huesmann (Ed.), *Aggressive behaviour: Current perspectives* (pp. 131-150). New York: Plenum Press.
- Laursen, B., Finkelstein, B. D., and Betts, N. T. (2001). A developmental meta-analysis of peer conflict resolution. *Developmental Review*, 21, 423-449.
- Leyva, F. A., and Furth, H. G. (1986). Compromise formation in social conflicts: The influence of age, issue, and interpersonal context. *Journal of Youth and Adolescence*, 15(6), 441-452.
- Lindeman, M., Harakka, T., and Keltikangas-Jarvinen, L. (1997). Age and gender differences in adolescents' reaction to conflict situations: Aggression, prosociality, and withdrawal. *Journal of Youth and Adolescence*, 26(3), 339-351.
- Maccoby, E. (1990). Gender and relationships, A developmental account. *American Psychologist*, 45(4), 513-520.
- Maccoby, E., and Jacklin, C. (1974). *The psychology of sex differences*. Stanford, CA: Stanford University Press.
- Maccoby, E., and Jacklin, C. (1980). Sex differences in aggression: A rejoinder and reprise. *Child Development*, 51, 964-980.
- Maccoby, E. E. (1988). Gender as a social category. *Development and Psychopathology*, 24(6), 755-765.
- Nilan, P. (1991). Exclusion, inclusion and moral ordering in two girls' friendship groups. *Gender and Education*, 3(1), 163-182.
- Olweus, D. (1996). *The revised Olweus bully/victim questionnaire*. Bergen, Norway: Research Center for Health Promotion (HEMIL Center): University of Bergen.

- Österman, K., Björkqvist, K., Lagerspetz, K., Landau, S., Fraczek, A., and Pastorelli, C. (1997). Sex differences in styles of conflict resolution: A developmental and cross-cultural study with data from Finland, Israel, Italy, and Poland. In D. P. Fry and K. Björkqvist (Eds.), *Cultural variation in conflict resolution: Alternatives to violence* (pp. 185-197). New York: Lawrence Erlbaum.
- Owens, L., Shute, R., and Slee, P. (2000). 'I'm in and you're out...' Explanations for teenage girls' indirect aggression. *Psychology, Evolution and Gender*, 2(1), 359-376.
- Owens, L. D. (1996). Sticks and stones and sugar and spice: Girls' and boys' aggression in schools. *Australian Journal of Guidance and Counseling*, 6, 45-55.
- Owens, L. D., and Daly, T. (2002). *Sex and age differences in victimisation and conflict resolution among adolescents in a South Australian school*. Paper presented at the International Society for Research on Aggression XV World Meeting, Montreal, Quebec.
- Rigby, K., and Slee, P. T. (1995). *Manual for the peer relations questionnaire (PRQ)*. Adelaide: University of South Australia.
- Russell, A., and Owens, L. D. (1999). Peer estimates of school-aged boys' and girls' aggression to same- and cross-sex targets. *Social Development*, 8(3), 364-379.
- Siegel, S. (1956). *Nonparametric statistics for the behavioral sciences*. New York: McGraw-Hill Book Company.
- Stark, L. J., Spirito, A., Williams, C. A., and Guevremont, D. C. (1989). Common problems and coping strategies I: Findings with normal adolescents. *Journal of Abnormal Child Psychology*, 17(2), 203-212.
- Underwood, M., Galen, B., and Paquette, J. (2001). Hopes rather than fears, admirations rather than hostilities: A response to Archer and Björkqvist. *Social Development*, 10(2), 275-280.
- Underwood, M. K., Galen, B. R., and Paquette, J. A. (2001). Top ten challenges for understanding gender and aggression in children: Why can't we all just get along? *Social Development*, 10(2), 248-266.
- Watson, S. (1997). Single-sex education for girls: Hetrosexuality, gendered subjectivity and school choice. *British Journal of Sociology of Education*, 18(3), 371-383.