The Effect of an Education Program on Attitudes and Beliefs about Bullying and Bullying Behaviour in Junior Secondary School Students

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This study assessed an intervention targeting bullying. Six schools were recruited, with 444 children aged between 12 and 15 years. Schools were randomly allocated to an intervention comprising education to students, parents and teachers about bullying and strategies believed to prevent bullying, or wait-list condition. Students reported bullying experiences on the Peer Relations Questionnaire and attitudes using the Attitude to Victim and Bully Scales, prior to the intervention and one year later. There was little difference between conditions on most measures. Short-term educational approaches appear to have little impact on bullying behaviour, and schools may need to develop alternative approaches.

Keywords: Bullying; school interventions; victimization; bullying attitudes

Introduction

The problem of bullying in Australian schools is significant, with approximately one student in every six said to be bullied by their peers at school each week (Rigby, 1998). Bullying can negatively impact upon a child’s life both physically and psychologically. Children who are bullied are more likely to report physical ill health, experience lowered self-esteem (some become significantly depressed), have few friends and tend to avoid school on a regular basis (Rigby, 1999). In line with these findings, an increasing number of researchers have recognised that bullying needs to be addressed and have evaluated a range of anti-bullying programs in schools across many countries.

The most comprehensive and influential anti-bullying school-based initiative was developed by Olweus (1993) and aimed to manipulate the school social environment by setting clear rules against bullying, implementing salient consequences for bullying, and increasing playground supervision. The introduction of this program across 42 schools in Bergen, Norway brought about significant decreases in the rates of bullying. However, later studies attempting to replicate these results have showed modest and inconsistent effects. For example, Roland (2000) reports on a later initiative across Norway in which 40 schools received a package outlining practical approaches to counter bullying, including recommendations for direct communication to students who bully and their parents, support for the victims of bullying, and classroom discussions of bullying. One region demonstrated a halving of reported bullying 2 years later, but another region demonstrated a slight increase in the rates of bullying. While Roland argued that the poorer results may be due to the lack of support for the schools, results from the Flemish Antibullying Intervention showed that varying the level of support for schools did not have an effect on outcome (Stevens, De Bourdeaudhuij & Oost, 2000). The Flemish study found that a school-based strategy that included classroom activities to increase awareness of bullying and active problem solving for those students directly involved in bullying had a significant impact on later reports of bullying in primary schools but not in secondary schools. Contrary to these findings, an intervention programme conducted in Italian schools that raised awareness of the negative effects of violence both in the school, at home and in the community generally showed more positive effects on direct forms of bullying in older (14–16 years) as opposed to younger (10–13 year) students (Baldry & Farrington, 2004). In the USA, Meraviglia et al. (2003) investigated the effect of a programme for 5th grade students that aimed to reduce the social acceptance of bullying and sexual harassment, through staff and parent education, policy development and classroom activities. While students in the intervention condition did not demonstrate an increase in their knowledge of bullying behaviours, the intervention group reported more bullying at school and on the bus following the programme. In Australia, Peterson and Rigby (1999) reported the outcome of an anti-bullying intervention in a secondary school. The intervention consisted of education to raise the level of awareness of bullying incidents at the school, whole-school policy development, procedures for dealing with reported incidents of bullying, inclusion of bullying issues into the curriculum, and a number of student-based initiatives. Over the 2 years of the project, it
appears that there was little change in reports of bullying with the exception of the new Year 7 class.

While the research support for such ‘whole-school’ intervention is mixed, there remains a strong commitment to ‘whole-school’ anti-bullying approaches that involve a significant educational component (Rigby, 1996). Studies that aim to increase awareness of the negative impact of bullying are potentially shifting student attitudes such that students are less accepting of bullying behaviour and hence less likely to engage in bullying behaviour. There is theoretical and empirical support for a relationship between attitudes and beliefs towards bullying and actual engagement in bullying behaviour, although the causal direction of the relationship remains unclear (Boulton, Bucci & Hawker, 1999; Rigby, 1997; Salmivalli & Voeten, 2004). The relationship between attitudes about bullying and actual bullying behaviour is consistent with literature that supports the role of children’s normative beliefs about the appropriateness of aggression in predicting aggressive behaviour (Bellmore et al., 2005; Huesman & Guerra, 1997; Tapper & Boulton, 2004). In other words, children who condone the use of aggression are more likely to be aggressive, as an aggressive response is included within their repertoire of acceptable behaviours. It is argued that in the case of bullying, attitudes towards the targets of bullying and acceptance of bullying behaviour will predict the likelihood of whether a child might bully another.

The current study was an attempt to assess the impact of an educational anti-bullying intervention in Australian high schools. Given the inconsistent results for universal school-based programmes in the literature, it was considered important to determine whether a focused educational intervention would have an impact on bullying. The study also sought to determine whether such an intervention would be effective through changing attitudes towards bullying and attitudes toward the victims of bullying. The study is a controlled outcome study to assess the specific impact of education targeting the school community about bullying, both on attitude change and reported incidents of bullying. The research was also designed to provide information about the extent of bullying across a number of schools within a sector of the Australian education system.

It was hypothesised that: (1) the provision of education will produce a shift in attitudes and behaviours, more specifically, a more sympathetic attitude to the victims of bullying and a decreased acceptance of bullying among students after one year in schools that receive that education compared to schools who do not; and (2) the provision of education will produce significantly fewer incidents of reported bullying after one year.

Method

Seven secondary schools were recruited into the project during 2001 and randomly assigned to either an intervention or control condition. Two schools in the intervention condition dropped out of the study in the early stages of the project, primarily due to time constraints. One additional intervention school was recruited in 2002 to balance the study design. One school did not complete the follow-up survey. Three single sex girls’ schools and two co-educational schools completed the study. All schools had established anti-bullying policies and were asked to continue with their standard approach to bullying, which included having explicit disciplinary procedures for students who were found to have bullied others. In terms of additional strategies, one school (in the control condition) staged a play with an anti-bullying message over the time of the study. The research was approved by the Sydney University Human Research Ethics Committee and the Catholic Education Office, Sydney.

Participants

Across the six schools commencing the project, consent forms and subject information were sent home with 2,111 students from grades 7 to 10, with an age range of 12 to 15 years. In total, 444 students completed the questionnaire battery at Time 1 (151 boys (34%) and 293 girls) and of those 318 (71.6%) repeated the questionnaires at Time 2. The overall participation rate for the six schools was 22.5% ranging from 11 to 74%. This low response rate is a common feature in research projects where both student and parent consent is required. The differences in recruitment rates across the schools resulted in 155 students being surveyed in the three ‘intervention’ schools, and 289 students in the three ‘control’ schools.

Procedure

Participants completed self-report questionnaires that assessed various aspects of bullying behaviour, and attitudes and beliefs about bullying. In addition, participants completed a questionnaire that assessed ethnic identification that is a focus of a second paper based on the study (Nguy & Hunt, 2004). The most frequently nominated ethnic label was Anglo-Saxon and comprised 31.7% of the sample. The other most frequent ethnic groups were Middle Eastern (19.0%), East Asian (13.0%), Mediterranean (7.9%) and Pacific Islander (2.5%).

An anti-bullying intervention was completed in the three ‘intervention’ schools. The author presented information at parent and teacher meetings about the nature of bullying in schools, levels of bullying reported by students in the initial survey, strategies for dealing with bullying at the individual and school level, and time was allowed for discussion. The teacher meetings were held in conjunction with regular staff meetings, and all teachers were present. The parent meetings were held after hours, usually with a small group of parents who, due to their numbers, were unlikely to be representative of the parent population as a whole. In order to try to target the larger parent group, a summary of the information covered at these meetings was published in the school newsletter. Furthermore, school staff conducted a 2-hour classroom-based discussion of bullying using activities from an anti-bullying workbook (Murphy & Lewers, 2000). These activities aimed to increase awareness and identification of bullying behaviours, to promote empathy for targets of bullying, and to help students think about various strategies for dealing with bullying. The educational intervention was deliberately designed to minimise the resources required from school staff and to increase the likelihood
that the intervention was conducted in keeping with the protocol. It was also believed that a ‘minimal’ intervention was consistent with bullying initiatives implemented in many Australian schools (Soutter & McKenzie, 2000), and hence the results could provide an evaluation of standard approaches. Furthermore, it was thought that should the intervention be successful in reducing reports of bullying behaviour, it could be easily implemented in schools in the absence of a research context.

The bullying questions were repeated in the following year in five schools to minimise any seasonal effects on the measurement of bullying, and to ensure that students were basing their reports of bullying experiences on a similar time period to the baseline assessment. One single sex control school did not continue with the study and follow-up assessments were not completed. In total, 111 participants completed the follow-up assessment in the ‘intervention’ schools and 207 completed the follow-up in the ‘control’ schools, resulting in a 28% and 18% drop-out rate respectively.

Materials
Peer Relations Questionnaire (PRQ). The PRQ (Rigby, 1998) is a self-report measure to assess the nature and extent of bullying problems in a student’s school. Students are asked to estimate the frequency with which they had been bullied by other students at their school, the nature of that bullying and whom they confide in when they are bullied. Other items assess the frequency with which students bully others, the reasons they have for bullying others and whether the bullying is done individually or in groups. Finally, students are asked questions relating to how they feel about addressing the issue of bullying in their schools. The PRQ manual provides normative data on a number of these items based on an Australian sample of 26,000 students, indicating that approximately 50% of students personally experience some form of bullying (Rigby, 1998). The internal consistency of the victim scale is strong, ranging from .77 to .83 across different gender and age groups. The validity of the scale is moderate, correlating with peer nominations between .19 and .46 (p < .001) across gender and age groups.

Attitude to Victim Scale—Short Version. The short-version of the Attitude to Victim Scale is a 10-item scale that assesses the degree which a person is willing to justify bullying behaviour and support bullies; their desire to support the victims of bullying; and their tendency to reject children who are bullied by other children because of their supposed weakness (Rigby & Slee, 1991). The internal consistency for this version of the scale is good (Cronbach alpha .81 for boys and .78 for girls, Rigby, 1997). The internal consistency for the scale based on this sample was lower, .67 for boys and .46 for girls.

Attitude to Bullying Scale. The Attitude to Bullying Scale comprises two subscales. Only the first subscale was used in the current analyses and consisted of 7 statements that list possible consequences of bullying, for example: Bullying makes you feel good about yourself. Students are asked to rate how likely they believe a particular consequence will be for a bully. Higher scores are indicative of more positive attitudes towards bullying. The internal consistency for this scale is moderate (Cronbach alpha .71, Rigby, 1997). The internal consistency for the scale based on this sample was .76 for boys and .64 for girls.

Analyses
Differences between the ‘intervention’ and ‘control’ schools were assessed across 11 outcome variables: Attitude to Victim scale, Attitude to Bullying scale, estimated prevalence of bullying at school, experience of being bullied at school, perceived school safety, likelihood of telling somebody about being bullied, perceived ability to stop other students from bullying, attempts to stop people form bullying others, perceived ability to join in bullying others, actually bullying others as part of a group, and bullying others alone. A repeated measures ANOVA with two between-subject factors (intervention and sex) was conducted to assess main and interaction effects for each variable. In order to reduce the risk of Type 1 errors, a conservative alpha of .01 was adopted for these multiple analyses.

Results
Effect of the educational intervention
To test whether the intervention was effective after controlling for pre-test differences, the interaction effect between pre-/post-test, and control/intervention group was considered. Significant differences were found on two measures (Table 1). Students in intervention schools reported a significantly greater reduction in bullying others than students in the control schools with regard to bullying others alone ($F = 7.958, df = 1, p < .01$). Furthermore, boys showed greater reductions in their reported bullying others when alone ($F = 7.958, df = 1, p < .01$). Significant intervention by sex interactions were also found for bullying others alone ($F = 6.978, df = 1, p < .01$). Boys in the intervention group showed a significant reduction in their reports of bullying compared to boys in the control schools and compared to girls in both conditions. The size of this decrease was large (effect size $= .90$) but represented a relatively small number of male students ($n = 25$) in the single co-educational ‘intervention’ school. There were no further significant main or interaction effects, although a similar trend was found for boys bullying other as part of a group, in which the main and interaction effects were significant at .05.

Changes over time
The within-subjects effect was considered to assess for significant changes between Time 1 (baseline) and Time 2 across the sample as a whole. One variable showed significant change over time. At post-test, students reported that they were less likely to have been bullied themselves ($F = 9.069, df = 1,254, p < .01$). The effect size of this change was .27 in the intervention condition and .18 in the control condition.

Incidence of being bullied. Students were asked to rate how often they were bullied during the current year of the study. Overall, 54.5% of students reported never
being bullied by another student ‘this year at this school’ at Time 1. However, 19.0% reported having been bullied ‘a few times’, with 6.0% reporting being bullied ‘lots of times’. There were no significant differences in the frequency with which students reported being bullied according to gender ($\chi^2 = 2.39$, $df = 3$, $p = .49$), or ethnicity (Anglo-Saxon versus other; $\chi^2 = 5.42$, $df = 3$, $p = .14$). 24 students (5.4%) reported that they had stayed away from school on at least one occasion because of bullying.

Of those students who had reported the experience of being bullied at Time 1, 7.7% reported that they had ‘often’ been teased in an unpleasant way, 10.1% said that they had ‘often’ been called hurtful names, 6.8% had been ‘often’ left out of things on purpose, 2.5% had been ‘often’ threatened with harm, and 2.7% had been ‘often’ hit or kicked. Girls were more likely than boys to report being called hurtful names ($\chi^2 = 6.14$, $df = 2$, $p < .05$), while boys were more likely to have been threatened with harm ($\chi^2 = 13.1$, $df = 2$, $p < .01$) or hit or kicked ($\chi^2 = 22.8$, $df = 2$, $p < .001$). Post-hoc analyses were conducted to see whether these types of behaviour directed at victims changed across time. No significant changes were found at $p < .05$.

**Incidence of bullying others.** Across the sample, 80.5% of students reported at Time 1 that they had not bullied anyone on their own during the year and 71.1% indicated they had never been part of a group that had bullied someone. Nine students reported bullying others about once a week with seven reporting bullying others several times a week. Male students were more likely to report bullying another person on their own in comparison to female students ($\chi^2 = 19.18$, $df = 4$, $p < .05$). There was no significant gender difference in the participation of bullying behaviour as part of a group.

**Discussion**

The baseline survey of beginning secondary school students revealed significant reports of bullying consistent with existing Australian data; at least one third of the student sample reported that they had personally experienced bullying. This finding is consistent with other large school surveys in Australia (Bond et al., 2001) and overseas (Haynie et al., 2001; Nansel et al., 2001) and suggests that the current sample is representative of the larger population of beginning secondary school students. While many students report having been bullied by others, a smaller proportion of students reported that they bullied others, either on their own or as a group. Again, this finding is consistent with the research literature that indicates that approximately one-fifth of students will admit to bullying others.

There were few sex differences, although the types of bullying behaviours experienced were largely consistent with the research literature. Boys were more likely than girls to have experienced direct physical bullying, while girls were more likely than boys to have experienced direct verbal bullying. It is of interest that there was no gender difference in the experience of indirect or social bullying such as being left out of things on purpose, which is usually considered to be the domain of girls. Contrary to expectations that female students would be more likely than male students to be involved in bullying as part of a group, there was no sex difference on this measure. Instead, boys were more likely to report bullying someone else on their own.

It was predicted that the provision of a brief educational intervention to teachers, parents and students would produce a shift in attitudes and behaviours. More specifically, it was predicted that there would be a more sympathetic attitude to the victims of bullying and a decreased acceptance of bullying among students after one year in schools that received education compared to schools that did not. However it was found that students in ‘intervention’ schools did not appear to change in their attitudes towards bullying or victims across the two time points relative to students in the ‘control’ schools. Instead the sample as a whole demonstrated stable pro-bullying attitudes, which contrasts with Rigby (1997) who found an increase in pro-bullying attitudes across the middle school years, with peaks at age 15–16 for boys and 13–14 for girls. The finding that the sample as a whole tended to report stable attitudes towards victims across time might also be favourably interpreted given previously reported findings that positive attitudes towards victims tend to decrease across the high school years (Menesini, et al., 1997; Rigby & Slee, 1991). However, this finding needs to be tempered against the poor internal consistency of this measure in the current sample, particularly among girls.

It was also predicted that the intervention would produce significantly fewer incidents of reported bully-

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**Table 1.** Means and standard deviations of outcome variables across time and condition

<table>
<thead>
<tr>
<th></th>
<th>Intervention ($n = 152$)</th>
<th>Control ($n = 248$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 1</td>
<td>Time 2</td>
</tr>
<tr>
<td>Attitude to victim scale</td>
<td>28.13 (2.10)</td>
<td>28.45 (1.94)</td>
</tr>
<tr>
<td>Prevalence of bullying</td>
<td>2.37 (0.86)</td>
<td>2.34 (0.83)</td>
</tr>
<tr>
<td>Experience of being bullied</td>
<td>5.14 (1.21)</td>
<td>5.47 (1.12)</td>
</tr>
<tr>
<td>Perceived school safety</td>
<td>1.81 (0.63)</td>
<td>1.83 (0.59)</td>
</tr>
<tr>
<td>Ability to stop others bullying</td>
<td>1.77 (0.64)</td>
<td>1.71 (0.65)</td>
</tr>
<tr>
<td>Attempts to stop others bullying</td>
<td>2.37 (0.86)</td>
<td>2.34 (0.83)</td>
</tr>
<tr>
<td>Ability to join in bullying</td>
<td>4.34 (1.52)</td>
<td>4.62 (1.31)</td>
</tr>
<tr>
<td>Bullying others with group</td>
<td>1.47 (0.70)</td>
<td>1.39 (0.72)</td>
</tr>
<tr>
<td>Bullying others alone</td>
<td>1.30 (0.60)</td>
<td>1.17 (0.46)</td>
</tr>
</tbody>
</table>
ing after one year. However, there were no differences in the degree to which reported bullying incidents changed over time between students in the ‘intervention’ versus ‘control’ schools. Instead, in all schools there was a significant decrease across time in children’s reports of having been bullied. This finding is consistent with Whitney and Smith’s (1993) findings of a decrease across time in reports of being bullied. However, there was a significant difference between the ‘control’ and ‘intervention’ schools in the number of students who reported having bullied others. The decreased reporting of bullying others was limited to one group of male students in a co-educational school. While this appears to be a strong effect, the small sample size and the location of this effect within one school means that the results require replication before definite conclusions can be drawn about the possible effects of an educational intervention on boys’ bullying behaviour. There were no apparent decreases in bullying others among female students who made up the vast majority of the sample. For female students in particular, the findings are consistent with previous research that shows a gradual decrease in the proportion of students who are bullied over time from the age of 13, but no decrease in the prevalence of those who bully others. It is possible that the same number of bullies come to target a smaller number of peers across secondary school. While this pattern may be developmental in nature, the changes may also reflect efforts within the schools to target school bullying. It is possible that schools that volunteer to be involved in research, are more engaged in strategies to counter bullying than the average school whether assigned to an ‘intervention’ condition or not. For example, in the current study one ‘control’ school staged an anti-bullying play between the two assessment occasions.

There are a number of limitations to the research, in part due to the inherent difficulties in conducting school-based research, but which need to be taken into account when interpreting the findings. All schools volunteered to be part of the study, and thus it is possible that these schools are different in their motivation to implement anti-bullying initiatives relative to the wider population of schools. Only five schools completed the study, there were no single sex boys’ schools, and there was only one co-educational school in the intervention condition. Similarly, the low participation rate raises the possibility of a selection bias among the participants, meaning that the findings might not be generalisable to the larger population of school students. While the classroom-based activities were standardised, no assessment of adherence to the intervention was made, possibly calling into question the fidelity of the intervention. The post-test was conducted 1 year later to control for seasonal effects and the period of time over which students rated their experiences of bullying. In hindsight, it might have been useful to assess for an immediate impact of the intervention, to determine if there were short-term effects that diminished over time. Furthermore, given the suggestion of sex differences it would have been useful to assess the prevalence of different types of bullying behaviour such as direct and indirect bullying. Notwithstanding these limitations, the study adds to the body of school-based research that suggests that changes in bullying behaviours are difficult to achieve with educational approaches alone. The strengths of the study include the randomised, prospective design, and the use of an intervention that is brief and relatively easy to administer in the school setting.

Conclusions
The finding of significant levels of bullying across schools, consistent with other surveys, provides an impetus for further research into this problem. However, the brief educational component did little to impact attitudes towards bullying or actual bullying behaviour, with the possible exception of male students within one school. If replicated, this finding would support the wider application of a relatively brief and simple intervention to decrease the incidence of bullying amongst male students. It is unclear whether the intervention had no impact on the female participants, or whether the impact was rendered insignificant in the context of well established anti-bullying policies in schools in the current project. It is noteworthy that such policies are consistent with the original Olweus program that featured clear rules and salient consequences for engaging in bullying behaviour, and adequate playground supervision. Hence the findings are consistent with previous research that indicates that school-based educational approaches do not have a reliable and significant effect on rates of bullying. The current study perhaps best illustrates that there are no easy solutions in dealing with the problem of bullying in schools. Given research findings that suggest that students in secondary schools can be more resistant to anti-bullying initiatives, developmental factors may be important, with adolescents less likely to respond to ideas and rules introduced by teachers (Stevens et al., 2000). In the current study only 38% of students indicated that they would be interested in working with teachers to stop bullying, Alternatively, approaches that focus on more proximal determinants of aggression, such as social information processing, might be more promising (Bellmore et al., 2005). As there are likely to be factors other than attitudes and classroom norms that influence bullying behaviour (Salmivall & Voeten, 2004) we need to better understand variables that influence bullying behaviours, at the individual, social and institutional levels.

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References


