

Bullying prevention programs: the importance of peer intervention, disciplinary methods and age variations

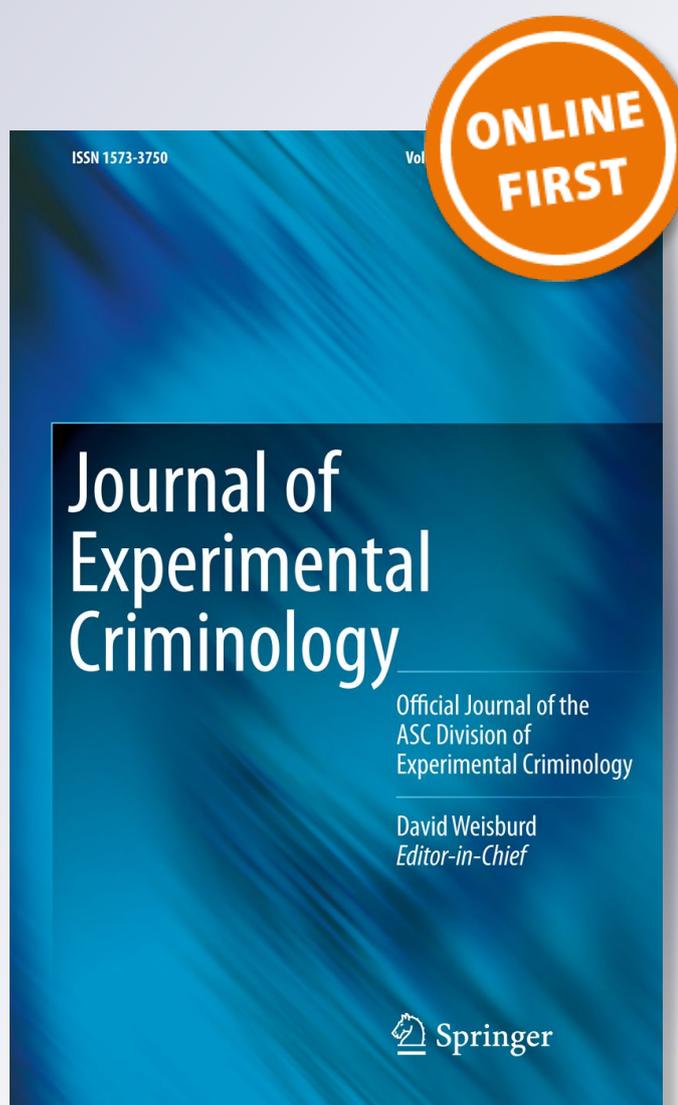
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Bullying prevention programs: the importance of peer intervention, disciplinary methods and age variations

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Abstract

Objectives The aim of this paper is to respond to the commentary of Peter K. Smith, Christina Salmivalli, and Helen Cowie (*Journal of Experimental Criminology*, 2012), who raise concerns regarding some of the findings of our systematic review and meta-analyses on the effectiveness of bullying prevention programs. They target three findings in particular: (1) the significant association of ‘Work with Peers’ with greater victimization; (2) the significant association of ‘Disciplinary Methods’ with less bullying perpetration and victimization; and (3) the age variations in effectiveness, suggesting larger effect sizes for older age students.

Methods We provide explicit information and further detailed analyses on the relationship between these features and effect sizes, including heterogeneity tests and results from weighted regression analyses. For one element in particular (work with peers), we present further research findings from evaluations conducted by Smith, Salmivalli, and Cowie (and also findings from other independent researchers) which support our previous findings. New within-program analyses to examine variations in effect sizes with the age of the students are also presented.

Results Evaluations conducted by Smith, Salmivalli and Cowie (and by other independent researchers) indicate the same research conclusions: although peer support schemes appear effective based on *attitudinal surveys*, these schemes are not related to *actual levels* of bullying or victimization and, in fact, are quite often related to an increase in bullying and victimization. Our definition of ‘disciplinary methods’ did not include the zero-tolerance approach or any type of harsh discipline as suggested in the commentary. In all relevant cases, ‘disciplinary methods’ included sanctions within a warm and loving framework, following the Olweus bullying prevention guidelines. While most programs that utilized firm disciplinary methods were inspired by Olweus, the relationship between disciplinary methods and less victimization was not driven by the Olweus program (which was not related to the victimization effect size). Larger effect sizes (i.e. reductions in bullying and victimization) for programs implemented with older students is a robust result also found in a more recent systematic review regarding the effects of anti-bullying programs on bystander intervention. In

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within-program analyses, most results suggested that effect sizes were greater for younger students, but these results were driven by the less controlled evaluations. The most controlled evaluation (randomized experiment) provided the opposite result. *Conclusions* More research is clearly needed on the effectiveness of bullying prevention programs with students of different ages, and we also recommend randomized experiments to assess the importance of different intervention components.

Keywords Bullying prevention · Meta-analysis · Peer support schemes · Disciplinary methods · Age variations

Introduction

Involvement in school bullying as either a perpetrator or victim is a traumatic experience with both concurrent and long-term negative effects (Ttofi and Farrington 2008a). Findings from a recent systematic review (Ttofi et al. 2011b; Farrington et al. 2012) clearly show that bullying perpetration at school is a significant predictor of offending up to about 6 years later (range in years: 0.42–16.50; $M=5.84$; $SD=4.56$), even after controlling for other major childhood risk factors (adjusted OR: 1.89; 95 % CI: 1.60–2.23). Bullying perpetration is also a significant predictor of violence (adjusted OR=2.04; 95 % CI: 1.69–2.45) an average of 6 years later in life (Ttofi et al. 2012). Results are equally disheartening for the victims of school bullying (Ttofi et al. 2011a; Farrington et al. 2012). Bullying victimization is a significant predictor of depression up to about seven years later (range in years: 1.00–36.00; $M=7.13$; $SD=8.79$), even after controlling for other major childhood risk factors (Adjusted OR: 1.71; 95 % CI: 1.49–1.96).

In light of these results, it comes as no surprise that a great deal of money and energy has been invested in intervention efforts aiming to reduce school bullying. Several bullying prevention programs have been evaluated using controlled methodological designs (Farrington and Ttofi 2009; Ttofi and Farrington 2011). Notably, these evaluations provide information about elements included in their bullying prevention strategies as well as information about their implementation procedures. In our meta-analytic work, correlational analyses were conducted in order to investigate which program components and implementation features are most strongly correlated with effect sizes across programs. In total, 20 intervention components and 12 implementation features were related to effect sizes.

In their commentary, Peter Smith, Christina Salmivalli, and Helen Cowie (Smith et al. 2012) focus on our findings that: (1) programs including work with peers tend to have smaller effect sizes, (2) programs including firm disciplinary methods tend to have larger effect sizes, and (3) programs tend to work better with older students (those aged 11 or older). We welcome their commentary, because it encourages us to study these issues in more detail.

Smith and colleagues state that “the attempt to examine the effects of various program elements or design features is innovative, and provides a useful basis for further discussion. However, we believe that it is quite premature to take such firm policy recommendations from those analyses ...” We do not agree that we make firm policy recommendations. After saying “it seems from our results that work with peers

should not be used” (which does not seem to us to be a firm policy recommendation), we go on to say “it should be borne in mind, however, that we have discovered the program elements that are most highly correlated with effectiveness. This does not prove that they cause effectiveness, but this is the best evidence we have at present” (Ttofi and Farrington 2011: 44). We agree that our results should not be the basis for ‘firm policy recommendations’ but we also believe that they should at least be taken into account in designing future bullying prevention programs. Our weighted regression analyses showed that work with peers and disciplinary methods were related to effect size after controlling for all other program components and implementation features.

We have re-read all 44 evaluations and summarize the key results in Table 1. In particular, we give as much information as possible about the ages of the students, work with peers, and disciplinary methods. In creating this table, we discovered errors in the coding of the Ciucci and Smorti (1998) evaluation. This was published in Italian and we have discovered that the original translation was incorrect in regard to the age of the students (previously 7.5, correct 13.5) and whether the program involved work with peers (previously yes, correct no). Table 2 shows the corrected table of effect sizes (Odds Ratios) versus categories of variables. Compared to the original tables in our article (Ttofi and Farrington 2011: 41–42), there are no changes in the Odds Ratios and only minimal changes in the *p* values.

Effects of peer support schemes on school bullying

Smith and colleagues argue that there are definitional problems with the element we coded as “Work with Peers” because this is a multi-faceted concept. We disagree. In our Campbell Collaboration Report (Farrington and Ttofi 2009: 64) we carefully defined this element as involving the formal engagement of peers in tackling bullying. We only included a program as including ‘work with peers’ if it included peer mediation, peer mentoring, or engagement of bystanders in bullying situations. Thus, the Karna et al. (2011) program was coded as including work with peers. If there were merely classroom discussions about bullying, awareness raising, or the formulation of rules for bystander intervention, we would not code this as work with peers. The Ciucci and Smorti (1998) evaluation was coded as not having work with peers because they only had role playing exercises and ‘quality circles’ for bullying awareness, but no formal engagement of peers in tackling bullying.

Table 1 clearly shows that all programs that included this element did indeed include a formal engagement of students in the school anti-bullying strategy. Although different programs defined this group of students as ‘Peer Mediators’, ‘Peer Supporters’ or ‘Peer Buddies’, essentially this element refers to the same latent construct, namely: “peer support strategies which use the student peer group both to prevent and respond to bullying” (Thompson and Smith 2011: 35). Taking into account this definition, we were surprised to read in the commentary that these schemes “are not designed to prevent bullying but only to support victims after the bullying had taken place.”

We consider that the evidence about the effectiveness of peer support schemes in reducing bullying is not encouraging. To be sure, these schemes have been found to be effective in increasing the self-esteem and feelings of responsibility of the students

Table 1 Evaluation studies with accompanying program/evaluation elements

Name of program	Bullying OR (95 % CI)	Victimization OR (95 % CI)	Work with peers	Disciplinary methods	Average age
Randomized experiments					
Bulli and Pape	1.14 (0.51–2.58)	1.69 (0.76–3.78)	X	X	Students from two middle schools and one high school (Baldry and Farrington 2004; 4) 13.2 in experimental group; 13.5 in control group (Baldry and Farrington 2004; 5) Mean Age: 13.35
Project ploughshares puppets for peace	1.14 (0.53–2.46)	N/A	X	X	Students in Grades 3 and 4 from 2 public schools (Beran and Shapiro 2005: 704) Mean Age: 9.50
Short video intervention	0.93 (0.38–2.27)	N/A	X	X	Participants drawn from two registration classes from Years 7, 8, 9, 10 accordingly; modal ages= 11, 12, 13, and 14 years respectively (Boulton and Flemington 1996: 335) Mean Age: 13.00
Friendly Schools	0.77 (0.51–1.15)	1.07 (0.79–1.43)	The whole-school planning and strategy manual includes Strategies for Peer Support and social problem-solving (Cross et al. 2004: 192) and the Friendly Schools curriculum includes activities which promote peer and adult support for students who are being bullied (Cross et al. 2004: 193)	X	The friendly schools intervention was provided for the first 2 years of this (longitudinal) 3-year study, when the student cohort were in Grades 4 and 5 (Cross et al. 2004: 191) Mean Age: 8.60
S.S.GRIN	0.87 (1.03–1.21)	1.04 (0.75–1.45)	X	X	Third-grade students from 11 public elementary schools (DeRosier and Marcus 2005: 142) mean age: 9.00
Dutch anti-bullying program	1.12 (0.74–1.69)	1.25 (0.95–1.65)	X	Schools were asked to include in their activities the core program as described by Olweus (Fekkes et al., 2006: 640)	Children from the 3 highest grades of elementary schools, aged 9–12 (Fekkes et al. 2006: 639) Mean Age: 10.10
SPC and CAPSLE program	1.66 (1.10–2.50)	1.39 (1.02–1.91)	The CAPSLE program targets all actors, including bystanders (Fonagy et al. 2009: 608), and includes Peer Mentors (Fonagy et al. 2009: 610)	X	Students in Grades 3 to 5 from nine elementary schools (Fonagy et al. 2009: 608) Mean Age: 9.00