

# Conflict resolution, peer mediation and young people's relationships

Review conducted by the Personal, Social and Health Education (PSHE) school-based Review Group

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The results of this systematic review are available in four formats:

**SUMMARY**

Explains the purpose of the review and the main messages from the research evidence

**REPORT**

Describes the background and the findings of the review(s) but without full technical details of the methods used

**TECHNICAL REPORT**

Includes the background, main findings, and full technical details of the review

**DATABASES**

Access to codings describing each research study included in the review

These can be downloaded or accessed at <http://eppi.ioe.ac.uk/reel/>

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## **ABBREVIATIONS**

DfES	Department for Education and Skills (England)
EPPI-Centre	Evidence for Policy and Practice Information and Co-ordinating Centre, at the Social Science Research Unit of the Institute of Education, University of London
ESRC	Economic and Social Research Council (UK)
ITT	initial teacher training
LEA	local education authority
NSPCC	National Society for the Prevention of Cruelty to Children
PSHE	Personal, Social and Health Education
WoE	weight of evidence

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# Summary

## **Who wants to know and what do they want to know?**

Pupils and teachers at Hatch End High School, Harrow, chose 'relationships' as the topic for this review. They wanted to know what schools could do to improve young people's relationships with each other, with teachers and with their families. This is a key question for schools, policy-makers and pressure groups; there are currently programmes and initiatives on behaviour, citizenship, healthy schools and many other areas which have relationships at their core. Within that broad area, the team looked in more detail at school programmes that encourage conflict resolution and peer mediation.

## **What did we find?**

We found evidence of some benefits for pupils of school interventions in conflict resolution, negotiation skills and peer mediation. Programmes that were studied were quite varied and included classroom based versus whole school initiatives; lessons delivered by teachers versus the use of outside staff; training integrated into academic curricula versus use of the social and personal education area; and use of peer mediation in some programmes. Studies tended to measure the effects that were 'closest' to the intervention - views about conflict, understanding of

what had been taught - rather than longer term and more 'distant' effects, such as pupils' confidence and ability to make better relationships. The programme that used teaching within an academic curriculum had good results. Some studies looked at the impact on reports of disciplinary incidents in schools and found a positive but limited impact.

## **How did we get these results?**

First, we looked for research in secondary schools about young people's relationships and found a very varied set of studies. Within those we chose a small set of studies that addressed the question:

*Do planned educational interventions in conflict resolution skills, negotiation skills and peer mediation improve young people's personal and social relationships?*

We put together the results of 10 studies from USA, Canada and Australia. All were published after 1994 and all compared the results for pupils in these programmes with pupils not in the programmes.

## **What are the implications?**

These are promising interventions that deserve to be rigorously tested in UK schools.

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## CHAPTER ONE

# Background

The Personal, Social and Health Education (PSHE) Review has been based in Hatch End High School in Harrow. The Group was made up of a team of nine students (years 10-11), five teachers and a parent, and an Advisory Group mainly made up of academics and other researchers in the field of relationships education. The topic for the review was chosen by the students and teachers. They looked at the range of topics covered by the PSHE syllabus guidelines and decided to select issues in the area of relationships. How the group has worked is described in section 2.1. Chapter 3 reports on a systematic map - a description of scope and coverage of the research literature - of studies that evaluate interventions in school settings that aim to improve young people's relationships. Chapter 4 presents the results of an in-depth review of the findings of a subset of this literature which looks at the impact of interventions promoting negotiation skills, conflict resolution and peer mediation.

Although the project was initiated by a PSHE teacher, the process of consultation with students and teachers has resulted in a review that has relevance beyond PSHE. The findings are important for the current national policy concern about school behaviour and more widely for the many groups and individuals working to improve young people's relationships.

### 1.1 Aims and rationale

The initial aim of the review was to find out if planned interventions in school settings improve young people's personal and social relationships. As the review developed in consultation with the students and teachers, the specific area of conflict resolution and peer mediation was chosen to study in depth. The review has been undertaken to provide findings that are relevant and useful to students and teachers at Hatch End High School.

### 1.2 Definitional and conceptual issues

Owing to the way that the topic was decided upon, we have worked with an assumption that the views and experiences of school students should be the foundation of the review. The team at the EPPI-Centre developed ways of understanding and structuring the literature during the course of the review. Through meetings with the school students and teachers, we were able to test our interpreta-

tions and modify the direction of the review. The key definitions below were based on discussion at the school and were intended to give us practical guidance about the scope of the review.

#### *Key definitions*

**Young people:** Aged 11-16, or where the average age of the sample falls within this range. The interventions should focus on categories of young people who would be likely to attend mainstream school.

**Relationships:** When used in the context of this review, this relates to the broad range of relationships as included in the non-statutory guidelines for PSHE. These include young people's relationships with teachers, parents and family, friends and boyfriend or girlfriend. In discussion with the students and teachers in the Review Group, it was decided to *exclude* studies related to crime and justice, and topics in sex and health education which fail to make direct links with improvements in young people's personal and social relationships.

**Interventions:** In school settings. This *excludes* interventions aimed at young people outside of school settings including media interventions.

**Time period:** Studies included in the mapping stage of the review were those published in or after 1986, which was when there was first a legal requirement for UK schools to teach and have a policy on sex education.

### 1.3 Policy and practice background

#### 1.3.1 Young people's relationships

There is evidence that relationships of all sorts are very important to young people; for example, questions to websites for young people are often about friendships and relationships with family as well as about more 'obvious' topics, such as sex (e.g. McPherson and Macfarlane, 2004). A survey of 510 teenagers aged 15-19, conducted by the Kids and Youth Consultancy for the Get Connected helpline, indicated that the greatest problem faced by the young people was their relationship with friends, family and others (reported by 31%). Drugs came next (19%) and bullying third (13%) (Get Connected, 2002). Childline's analysis of calls from boys and young men (Childline, 2003) showed that bullying, violence and family tensions were the main reasons for calls.

Government and media interest has tended to focus less on relationships in the broad sense and more on specific topics that are seen as problematic - sex, drugs and alcohol, violence and bullying. The choice of relationships as the topic for this review provided the Review Group with a challenge to look behind the most topical issues to the underlying questions of how young people relate to friends, family, peers and teachers.

#### 1.3.2 Education and other policy initiatives

The Review Group started by focusing on Personal, Social and Health Education (PSHE) because that was the role of the teacher who set it up. However, the topic chosen by the young people is much wider. For this review, the focus on interventions has been restricted to those based in mainstream schools. Even so, the research that we are covering is relevant to areas beyond PSHE, including citizenship; behaviour, attendance and bullying; inclusion and participation in school decisions; homework policies; motivation and self-esteem, and initiatives, such as Healthy Schools.

PSHE in England is covered by non-statutory guidelines (see, for example, the relevant sections in the National Curriculum website, [www.nc.uk.net](http://www.nc.uk.net)). The DfES guidelines for PSHE at Key Stage 3 (age 13-14) include a section on 'developing good relationships and respecting the differences between people'. PSHE is not covered in initial teacher training,

although some initial teacher training (ITT) students can take it as a special subject. Although it is not included in the National Curriculum, it has some overlaps with Citizenship education, which is covered. In addition, schools have statutory responsibilities in sex and relationships education (SRE). Following a report on SRE from Ofsted in April 2002, a Professional Development and Accreditation Programme, designed to raise the status and quality of SRE teaching was set up and is being rolled out nationally. In September 2002, a pilot specialist training scheme for school nurses was also begun. The Department of Health is funding a project to develop a school SRE programme specifically for boys. Drug education has also been the subject of recent initiatives with English state secondary schools required to have anti-drugs strategies in place by the beginning of this year. Relationships with peers are likely to be important in drug education.

Relationships also play a key role in Citizenship education. The Department for Education and Skills (DfES) guidance identifies three inter-related components that should run through all education for Citizenship ([www.dfes.gov.uk/citizenship](http://www.dfes.gov.uk/citizenship))

- **Social and moral responsibility:** Pupils learning - from the very beginning - self-confidence and socially and morally responsible behaviour both in and beyond the classroom, towards those in authority and towards each other
- **Community involvement:** Pupils learning about becoming helpfully involved in the life and concerns of their neighbourhood and communities, including learning through community involvement and service to the community
- **Political literacy:** Pupils learning about the institutions, problems and practices of our democracy and how to make themselves effective in the life of the nation, locally, regionally and nationally through skills and values as well as knowledge - a concept wider than political knowledge alone

Recent initiatives on bullying include the Charter for Action aimed at helping schools to prepare policies and the Anti Bullying Alliance launched by the government in September 2004. Another key policy intervention, the Healthy Schools Standard, includes a strong emphasis on participation of young people in the school's development (National Healthy Schools Standard, 2004a) and on ways of promoting young people's social and emotional wellbeing (National Healthy Schools Standard 2004b). Most recently, Government policy in England has emphasised behaviour. A Leadership Group on Behaviour and Discipline has been set up to report to the Secretary of State towards the end of 2005 and there is substantial funding for a National Behaviour and Attendance Strategy ([www.dfes.gov.uk/behaviourandattendance](http://www.dfes.gov.uk/behaviourandattendance)).

### 1.3.3 Voluntary sector activity

It is striking that the broad theme of relationships is relevant to the work of so many UK non-governmental organisations. There are support services, such as the NSPCC's school teams, helplines and websites aimed at children and young people (e.g. Childline; Get Connected, Worried? Need to Talk?) and action groups, such as the Sex Education Forum and the Peer Support Forum hosted by the National Children's Bureau. There are similarly targeted campaigns on emotional literacy by the group Antidote ([www.antidote.org.uk/](http://www.antidote.org.uk/)), several anti-bullying initiatives, and many other small and large scale initiatives.

In relation to the topics covered in the in-depth review, Mediation UK ([www.mediationuk.org.uk/](http://www.mediationuk.org.uk/)) and Leap ([www.leaplinx.com/](http://www.leaplinx.com/)) are among the groups which provide training and support for UK schools that want to set up negotiation and mediation schemes. Leap co-ordinates a young mediators' network. These groups argue that the interventions free up teacher time and improve relationships between students (e.g. [www.teachernet.gov.uk/teachingandlearning/library/peer-mediation/](http://www.teachernet.gov.uk/teachingandlearning/library/peer-mediation/)). There are also links to government initiatives, such as the National Healthy Schools Standard which includes peer mediation in some schools ([www.hda.nhs.uk](http://www.hda.nhs.uk)). Anti-bullying strategies also include peer mediation as one of several recommended approaches (e.g. [www.dfes.gov.uk/bullying/pack/02.pdf](http://www.dfes.gov.uk/bullying/pack/02.pdf)). Estimates vary of the numbers of schools using peer mediation and related approaches (Baginsky, 2004) but there are now many examples of school schemes on individual school websites and those of LEAs and supporting organisations (e.g. [www.citizenshipfoundation.org.uk](http://www.citizenshipfoundation.org.uk)).

In addition, many UK voluntary groups have commissioned research about the views and experiences of young people. They often lead the way in involving young people in decision-making and research.

## 1.4 Research background

### 1.4.1 Young people's involvement in research

This project is part of a move to set up research projects that involve children and young people in the design and conduct of the research. This links to two other areas: first, the interest in participation in research by 'stakeholders' more generally (e.g. Mental Health Foundation, 2003; National Healthy Schools Standard, 2004a); and, second, the wider moves, referred to above, to allow young people to have a say in the decisions that affect them. Both these could be seen as deriving their motivation from democratising tendencies in public services and from a belief that people who are directly involved in an issue have a crucial perspective to offer.

Research projects in which young people have been involved in the design or conduct of the research (as opposed to the larger number of studies which have sought the views of children and young people) are relatively recent and fewer in number (e.g. Kirby, 2004; Fielding and Bragg, 2003).

We have not been able to identify any other systematic reviews in which young people have been involved in the planning of a review, although there are examples of adults being involved in review groups about health topics, for example through the Cochrane Consumer Network ([www.cochrane.org/consumers/about.htm](http://www.cochrane.org/consumers/about.htm)). In this project, we made the assumption that the involvement of the school students and teachers had the potential to make a difference to the research. This could be because it leads to different questions from those most likely to be posed by researchers or because the work is done differently.

### 1.4.2 Research about young people's relationships

Research about young people's relationships is covered by a number of disciplines, including education, sociology, psychology and public health. For example, work relevant to this review could have come from sociological studies of children's relationships with friends and family (e.g. Alanen and Mayall, 2001; Gillies, 2003); studies of students' experiences in schools such as those by the ESRC Consulting Pupils about Teaching and Learning Project (e.g. Rudduck and Flutter 2004); studies of children's relationships from a child development perspective (e.g. Dunn, 2003); evaluations of large scale policy initiatives (e.g. Warwick et al., 2005); studies from a number of academic perspectives about young people and sexual behaviour, violence, drugs and alcohol use; research about emotional and social wellbeing from public health and other perspectives (e.g. Hartley-Brewer, 2001; Edwards, 2003; Weare and Gray, 2003; Wells et al., 2003).

There tends to be little overlap between these varied research literatures and no single theoretical or conceptual framework. For example, we compared three recent reviews of the literature aimed at, or commissioned by, UK policy-makers with an interest in young people's mental, emotional and social wellbeing (Edwards, 2003; Hartley-Brewer, 2001; Weare and Gray, 2003). We found that fewer than five percent of the references in Edwards' review were present in either of the other two. Overall, the Review Group expected to find their target studies within a very large and diverse literature, and this expectation was realised, as will be seen in the following chapters.

### 1.4.3 Relevant reviews

Recent systematic reviews have offered some support to the idea of whole school health promotion, including benefits in mental and emotional outcomes for children and young people (Licence,

2004; Lister-Sharpe et al., 1999; Wells et al., 2003). Many included studies were, however, rated as methodologically poor in terms of evidence for effectiveness. A systematic review of school-based violence prevention (Mytton et al., 2002) included trials of interventions for children already identified as at risk of aggressive behaviour. This review found that the interventions produced modest reductions in aggressive behaviour, but that study quality was often poor. The authors recommend well designed, large trials. We did not find any systematic reviews in the specific area of conflict resolution and peer mediation.

Other recent reports with literature reviews that are relevant include a study for DfES about children's emotional and social competence (Weare and Gray, 2003), a discussion of the impact of schools on children's mental health (Hartley-Brewer, 2001) and reports of a project on media and young people's personal relationships (Buckingham and Bragg, 2002, 2003).

### **1.5 Authors, funders, and other users of the review**

The review's direction has come from students and teachers at Hatch End High School in Harrow, Middlesex. Marc Tidd, who is a teacher at the school and school lead for PSHE, was seconded to work on the review during the school year 2003-04, with funding from the DfES via the EPPI-Centre. A team based at the EPPI-Centre liaised with the school and worked on the review. Funding came

from the DfES grant to the EPPI-Centre. An Advisory Committee commented on the protocol and draft report. Michael Baker helped with keywording as a volunteer. The initial idea for a school-based review group came from Marc Tidd at Hatch End High School and James Thomas at the EPPI-Centre.

### **1.6 Review questions**

The initial plan was to cover two research questions in the systematic map: one about the effectiveness of interventions and a second about the views of young people in the UK (What do young people (11-16, in UK) think improves, or could improve, their personal and social relationships?). The very large volume of literature that was found meant that only the first of these has been completed this year. So the systematic map identified studies that could answer the question:

*Do planned interventions in school settings improve young people's personal and social relationships?*

From the systematic map, a subset of the literature was selected to be studied in depth to address the following question:

*Do planned educational interventions in conflict resolution skills, negotiation skills and peer mediation improve young people's personal and social relationships?*

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## CHAPTER TWO

# Methods of the review

Systematic review methods were used throughout the review, using the EPPI-Centre guidelines and tools for conducting a systematic review (EPPI-Centre 2002a, 2002b and 2002c).

### 2.1 User involvement

#### 2.1.1 Approach and rationale

This is a school-based review which has taken its direction from pupils and teachers of a secondary school. This approach has aimed to make the review of interest and use to both pupils and teachers. The findings of this review will also have relevance to both policy-makers at the Department for Education and Skills (DfES) and those working for local education authorities. In addition, we hope that the review will be of importance to professionals such as those represented on our advisory board (see Appendix 1.1) and other professionals who are concerned with interventions which have an impact on young people's relationships.

#### 2.1.2 Methods used

A collaboration between the EPPI-Centre and Hatch End High School to conduct a systematic review was agreed in the summer of 2003. The collaborative review group was structured so that students and teachers at Hatch End High School were able to choose the topic and direction of the review.

James Thomas (EPPI-Centre) and Marc Tidd (Hatch End High School) agreed to organise the Review Group from members of their respective organisations. Marc identified a team of nine year 10 students, five teachers, a librarian and a parent governor. The year 10 students who agreed to take part were an already established group, which had previously been involved in LEA borough-wide initiatives in PSHE and Sex and Relationships Education.

Meetings between EPPI-Centre researchers, students and teachers were arranged and held at the school. This enabled the Review Group to decide

on the focus of the review question, the inclusion criteria, review-specific keywords, the focus of the in-depth review and the reporting of the review

The first task was to decide on the review question. The PSHE curriculum was presented to students in order to facilitate a discussion on the potential review focus. The students decided that they wanted to focus the review on young people's relationships. The EPPI-Centre Review Team took these ideas and worked on a review question to propose to them. Through a number of consultations and revisions the review team decided on the final review question: Do planned educational interventions improve young people's personal and social relationships?

The next set of meetings provided an opportunity for the students and teachers to help narrow the scope of the review. This fed directly into the exclusion criteria (set out in more detail in section 2.2.1). Firstly, students and teachers wanted to know about the education interventions that are taking place in secondary schools with students of compulsory secondary school age. Secondly, they wanted to know what works in terms of improving young people's social and personal relationships. The group then drew up a list of topics they did or did not want to see prioritised.

The contents of this list were also used to aid the EPPI-Centre members during the screening process. It provided a guide when deciding what counted as a school based intervention and what counted as personal and social relationships outcomes. Active reflection on what the students and teachers would want to be included provided greater clarification during the screening process, more so than if it had only been the EPPI-Centre staff making these decisions.

Consultation about the topic for the in-depth review was less satisfactory, partly owing to the timing of the research. The map of the literature was not completed until after the school term ended for the summer. Just before that, in July 2004, the team held a small meeting at the school where the preliminary results of the map were discussed with one teacher and four students. The meeting also covered the rough version of the video that the students were producing. Ideas for possible topics for in-depth review were briefly discussed and tended to focus on communication and communication skills for teachers and students. Over the summer holidays the researchers finished the map and looked for ways of identifying a clear review question for the in-depth review. It was difficult to make a reliable selection of studies to follow through the suggestion about communication as a topic and, after several internal meetings, it was proposed to look at studies of conflict resolution and peer mediation. This was checked with Marc Tidd but not at a meeting with the students.

We held a final meeting at the school in April 2005 where we presented the main findings of the in-depth review. Students commented on their experiences of peer support and other similar approaches. This was our last opportunity to meet the group of students because they were doing their GCSEs and then leaving school (Hatch End High School takes students up to age 16). See section 5.2.2 for some comments about collaboration in systematic reviews.

### **2.1.3 Primary research carried out by the students**

In parallel with the review process, students carried out primary research in the school. This included questionnaires and focus groups which were designed and carried out by the year 10 students. The questionnaires asked about PSHE lessons, friendships and views about family and girlfriend/boyfriend issues; the questionnaires were distributed to years 8 and 9. The focus groups asked small groups of pupils from years 8, 9 and 10 to talk about relationships. The findings from the questionnaires and videos were used to help in the review process by clarifying the views of students about relationships. (See Appendix 2.4 for further details.)

## **2.2 Identifying and describing studies**

### **2.2.1 Defining relevant studies: inclusion and exclusion criteria**

For a study to be included in the systematic map, it had to report on an evaluation of a planned intervention in a school setting aimed at young people in the 11-16 age group and with reported outcomes that include young people's relationships.

Formal exclusion criteria are shown in Box 1. The exclusion decision tree in Appendix 2.1 shows the method that was used in practice for applying these criteria. Screening took place in two ways. Abstracts downloaded from electronic searches were screened and coded to indicate what exclusion criterion (if any) applied to them. For those that remained, the full report was ordered and then checked again against the exclusion criteria. Other reports were identified from handsearching and from experts, and for these, the full report was screened with the same exclusion criteria. The aim was to track all the publications from searching through to the map.

#### **Box 1 Exclusion criteria for intervention studies**

- Not an evaluation Not average age 11- 16
- Not a review of evaluations of planned interventions in mainstream school
- Not an evaluation of a planned intervention in a mainstream school setting
- Not an evaluation about young people's relationship
- Not published after 1986
- Not published in English

### **2.2.2 Identification of potential studies: search strategy**

Reports were identified from the following sources:

- Searching of electronic bibliographic databases: ERIC (Educational Resources Information Center), PsycINFO, SSCI (Social Science Citation Index) BEI (British Education Index)
- Citations from reference lists of all included reports of intervention studies, reviews and systematic reviews
- Web searches
- Personal contacts

Appendix 2.2 contains the details of the searches carried out. The Review Group set up a database system, using Reference Management bibliographic software, for keeping track of, and coding, studies found during the review. Titles and abstracts were imported and entered manually into the database.

No searching took place after July 2004 and no further reports were obtained after 31 August 2004.

### **2.2.3 Screening studies: applying inclusion and exclusion criteria**

The EPPI-Centre team applied the inclusion and exclusion criteria at three points: successively to (i) titles and abstracts, (ii) full reports when they were first obtained, and (iii) again at keywording

when a few studies were judged not be relevant when read.

### 2.2.4 Characterising included studies

The reports that had been identified at first screening as intervention studies were keyworded using the EPPI-Centre's core keywording strategy for education (EPPI-Centre, 2002a) and online database software, EPPI-Reviewer (EPPI-Centre, 2002b). Additional review-specific keywords that are specific to the context of the review were added. The EPPI-Centre's core keywords and the review-specific keywords are contained in appendices 2.2 and 2.3 respectively. All the keyworded studies were uploaded from EPPI-Reviewer to the EPPI-Centre database, REEL (Research Evidence in Education Library), for others to access via the website.

### 2.2.5 Identifying and describing studies: quality-assurance process

Quality assurance was undertaken for both stages of the screening process.

#### (i) Screening of titles and abstracts

The EPPI-Centre team members undertook a screening moderation exercise with 20 random titles and abstracts. EPPI-Centre team members reviewed these papers against the inclusion criteria. First, they worked independently and then they compared their decisions with the group before reaching a consensus. Once a consensus had been reached, all of the EPPI-Centre team members, working independently, continued to screen the remaining potential studies titles and abstracts against the inclusion criteria.

#### (ii) Screening of full papers

After obtaining full papers, the Review Group conducted another moderation exercise in which five papers were screened against the inclusion criteria. The group discussed issues arising from the definition of 'relationship outcomes'. The full papers were then rescreened independently by the EPPI-Centre team members. At this stage in the screening process, all decisions to exclude papers were discussed and resolved by at least two reviewers.

### Keywording

Quality assurance of keywording was established through a moderation exercise. EPPI-Centre team members keyworded the same papers independently. The results were shared with each other and discussed with the rest of the group. Any differences that arose in the application of keywords were resolved. All papers were then keyworded independently by the Review Team. A random sample of 10 papers was double keyworded by an EPPI-Centre team member to ensure consistency.

## 2.3 In-depth review

### 2.3.1 Moving from broad characterisation (mapping) to in-depth review

The mapping exercise identified many studies relevant to the review question: *Do planned educational interventions improve young people's relationships?* The studies identified covered a diverse range of topics - such as bullying, citizenship and health related issues, and focused on peer, student-teacher and/or family relationships. The breakdown of studies into topic focus and relationship outcomes, as categorised in the map, provided the starting point for selecting studies to include in the in-depth review (see Chapter 3).

The EPPI-Centre members discussed the differences between selecting studies based on relationship outcomes or type of intervention. On closer inspection, it became apparent that choosing studies based on type of intervention would provide a better focus for the in-depth review. We decided to synthesise studies that reported on conflict resolution strategies. The in-depth review question was, therefore:

*Do planned educational interventions in conflict resolution skills, negotiation skills and peer mediation improve young people's personal and social relationships?*

The searches that had been done should have picked up all the studies with young people's relationships as outcomes, and these should include studies of the types of interventions that we wanted to look at in the in-depth review. We were concerned, though, that this was not the case and that we were missing important studies of this type of intervention that did have the relevant outcomes (see section 5.1). We therefore decided to run another search which would identify papers specifically on conflict resolution. This yielded a further 18 potential studies for inclusion.

To identify which studies would be included in the in-depth review, a second set of exclusion criteria were added to the first set of criteria (see 2.2.1) and applied to all the studies in the map. It was decided for practical reasons to limit studies to those published in the last 10 years. Studies without a control group were excluded from the in-depth review because of the difficulty, without some 'untreated' group for comparison, of judging whether the intervention had had an impact.

### *In-depth review exclusion criteria*

- Not an evaluation of a conflict resolution intervention and/or a violence prevention intervention
- Report does not have a control group
- Published before 1994

### **2.3.2 Detailed description of the studies in the in-depth review**

Studies identified as meeting the inclusion criteria were analysed in depth, using the EPPI-Centre's detailed data-extraction guidelines (EPPI-Centre, 2002c), together with its online software, EPPI-Reviewer (EPPI-Centre, 2002b).

### **2.3.3 Assessing quality of studies and weight of evidence (WoE) for the review question**

Three components were identified to help in making explicit the process of apportioning different weights to the findings and conclusions of different studies. Such weights of evidence are based on the following:

- A. Soundness of studies (internal methodological coherence), based upon the study only
- B. Appropriateness of the research design and analysis used for answering the review question
- C. Relevance of the study topic focus (from the sample, measures, scenario, or other indicator of the focus of the study) to the review question
- D. Overall weight taking into account A, B and C

When deciding how to judge WoE B, the following criteria were applied:

- Only randomised controlled trial is judged as high.
- All other evaluation studies are judged as medium.

To make a more careful judgement of the relevance of the study topic (WoE C), this question was broken down into two parts:

1. Relevance of particular focus: *setting and sample*
2. Relevance of particular focus: *outcomes*

The WoE of C was taken as the lower rating of the two.

The overall WoE D was taken as the lowest of any of the weights given to A, B or C.

### **2.3.4 Synthesis of evidence**

The data were synthesised to bring together the studies which answered the review question and which met the quality criteria relating to methodology, appropriateness and relevance. The studies included in the in-depth review did not provide data suitable for a statistical meta-analysis (see Chapter 4), so were synthesised narratively. We were able to achieve this by using the type of interventions and relationships outcomes as a framework for analysis.

### **2.3.5 In-depth review: quality-assurance process**

Four Review Group members were paired with different partners and allocated five data extractions to complete independently. They were then compared and any differences were reconciled and agreed by each pair. Weight of evidence was applied independently in the first instance, and discussed and agreed by all the Review Group members.

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## CHAPTER THREE

# Identifying and describing studies

This chapter is a report of the 'map' by which we mean a descriptive report of the types of studies that were found that are relevant to the initial research question. Section 3.1 describes the origin of the studies in the map; section 3.2 characterises the studies in the map in terms of the generic and the review-specific keywords and section 3.3 reports the results of the quality-assurance process; and section 3.4 summarises the systematic map.

### 3.1 Studies included from searching and screening

Figure 3.1 illustrates the process of filtering from searching to mapping and finally to synthesis. Table 3.1 below gives the origin of all reports found and those subsequently included in the systematic map.

A total of 6,013 citations were identified through systematic searches of nine electronic databases. The number of citations identified in each database is documented in Table 3.1. Of the 6,013 citations identified, 90 were duplicates and were excluded when titles and abstracts were screened.

The largest yield of the 6,013 citations identified came from Sociological Abstracts (1,457), PubMed (1,041) and ERIC (1,313).

After excluding duplicates, titles and abstracts the remaining papers were screened using the exclusion criteria, described in section 2.2.1. The majority of papers excluded at this stage (3,173) did not meet our first inclusion criterion: that is, they were not evaluations of interventions, reviews, or reports of young people's views. The second most common exclusion criterion was population: if a paper did not have its mean age between 11 and 16, then it was not included. This applied to 598 papers. Papers that did not focus on young people's relationships were also another important criterion on which studies were excluded (424).

The initial screening yielded 817 papers potentially relevant to our review. A further 53 papers were identified through handsearching and personal

contacts. Allowing for further duplicates (90) and papers that we were unable to obtain in time (166), 614 papers went through to full screening. Of these, 137 were classified as useful background to the current review, 101 as studies of young people's views, and a further 65 papers were coded as literature reviews.

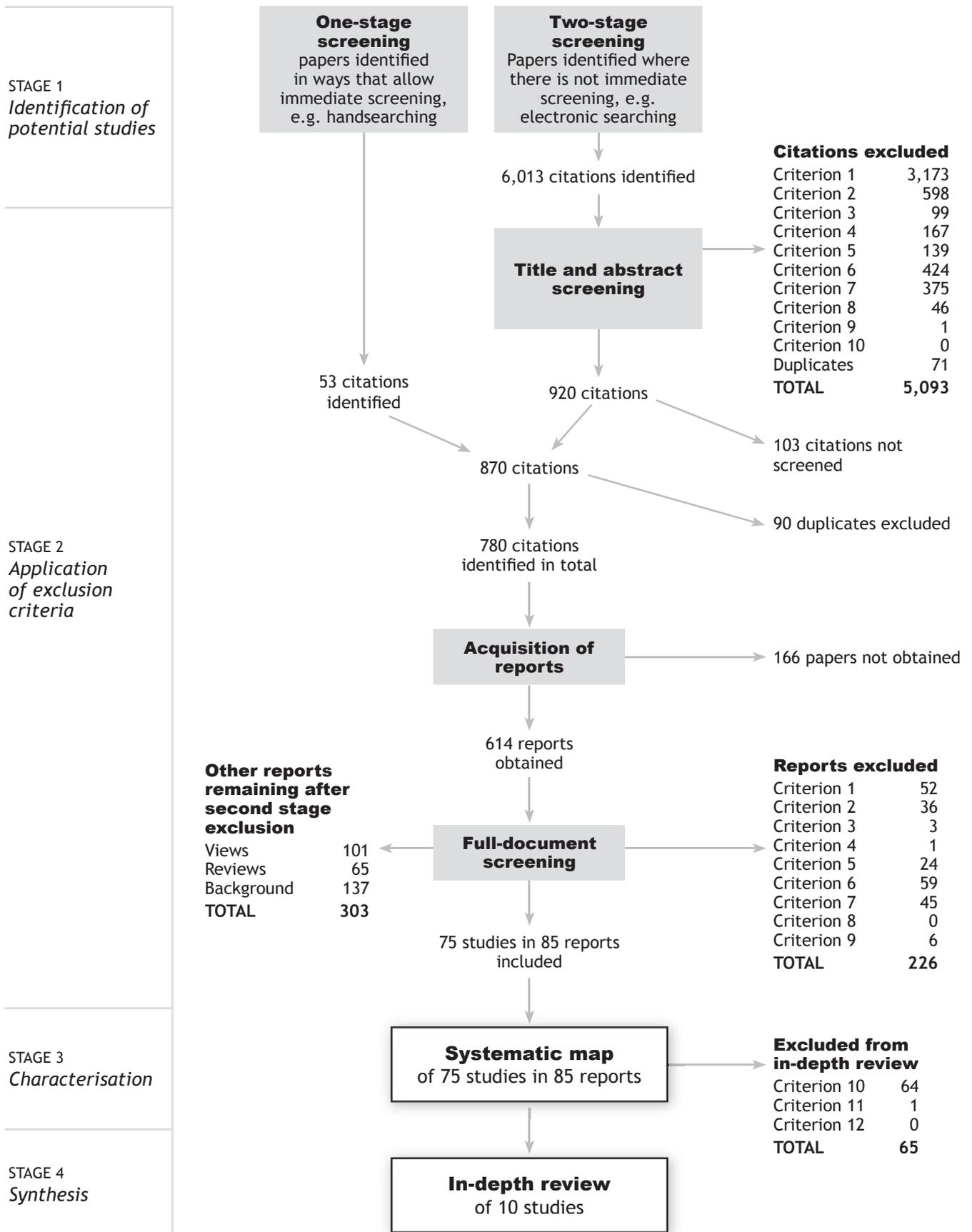
At this second, more detailed stage of screening, a further 226 papers were excluded, again most commonly on the grounds that they did not meet our first criterion for inclusion or that they were not about young people's relationships. We also screened a further 86 papers identified through the reference lists of key papers from our early searches. This resulted in a final total of 23 papers that met our inclusion criteria, of which 13 were intervention studies and included in the map, 6 were views studies and 4 were literature reviews.

Although we found a large number of papers, our search strategy was limited by constraints on time and resources, and we are aware that we have not identified all the relevant research in this field. If we had been able to conduct further, more detailed searches on the basis of our initial findings, we would have anticipated finding many more papers. The database closed on Friday 13 August 2004. Papers received after that date will be included in future updates to this review.

### 3.2 Characteristics of the included studies (systematic map)

The reports of the 75 intervention studies identified in the searches were used to describe each

**Figure 3.1** Filtering of papers from searching to map to synthesis



study, using the standard EPPI-Centre keywording sheet for education studies and also an additional sheet of review-specific keywords. This information is used next to give a picture of the research that we identified.

Although the studies have been conducted across a range of countries, Table 3.2 shows a Western and specifically USA bias, as the majority of studies have been conducted in the USA (47). The second largest group of studies have been carried in the UK, however with 11 studies this is a large gap between the two countries. Only a small minority were conducted in Africa (2) and Central South America (2). Three of the studies were also based in more than one country.

The majority of evaluation studies were coded as 'researcher manipulated' (N=59 studies, Table 3.3). This dominance partly reflects the number of intervention studies that were included because they were outcome evaluation studies that reported improvements in young people's relationships. These studies were more likely to have a control group or randomised controlled group design. Of the studies coded as 'researcher manipulated' evaluations, 18 studies were randomised controlled trials with the remaining 33 studies being mostly pre-test and/or post-test control group designs without randomisation.

Studies were only included in this review if the mean age of pupils fell within the 11-16 age range and reported on a planned educational intervention in a mainstream school setting; therefore the principal focus of most studies is on pupils attending secondary school (Table 3.4). There is a small overlap with studies that also included primary school aged children and pupils older than 16. Seventy-two of the studies were conducted with a mixed sex sample; however, the proportion of girls to boys in each sample was not consistently reported across studies.

### **Review-specific keywords**

The review-specific keywords gave us extra information about the studies in the map. The Review Team worked out what information was needed about the studies in order to help answer the review question. This included categorising the type of intervention being evaluated, describing the relationship outcomes measured by the researchers and recording how the intervention has been delivered and by whom.

The type of interventions each study reported on have been categorised into five subgroups (see Table 3.5). Of the 75 studies included in the map, behaviour (42) and social and emotional wellbeing (38) were in the majority. Studies that looked at behaviour topics included interventions designed to tackle bullying, help students with conflict resolution and peer negotiation, and improve their general social skills. The 24 health studies included

interventions designed to address problems, such as drug use or alcohol, or sexual behaviour. Interventions on educational topics were often aiming to improve students' knowledge in different areas and were only studied in conjunction with other intervention topics.

Interventions were mainly applied at the classroom level (Table 3.6). Means of applying school based interventions exist on a wide continuum from the small group level and one-to-one approaches to the whole school and wider than the school. Interventions often included more than one component that meant that they are backed up at the whole school level and delivered as part of classroom discussions and activities, in order to be more comprehensive. It is rare to find interventions that are only delivered at the whole school level (although there are some), whereas it is more common to find interventions that are delivered solely in classrooms or small groups.

The most popular method of delivering interventions (Table 3.7) is by teachers and/or school staff. Thirty-three studies use subject teachers followed by tutors (20), other non-teaching staff members (17) and head of years (10). This can be linked to the findings in Table 3.8 with interventions predominantly being delivered in the classroom. Peers and outside agencies also undertake the delivery of interventions instead of and/or alongside school staff. Again, similar to the findings presented in Table 3.6, studies that include interventions with more than one component often use a variety of delivery methods.

A common way to deliver interventions in the classroom and in small groups is through discussions (40) and activities (35) (Table 3.8). A smaller minority of studies used less traditional methods, such as drama, videos/films and games.

Table 3.9 shows that just over half of the studies (42) included in the map focused on relationships between pupils and their friends and peers. To a lesser extent, parents and families (21) and relationships between teachers and students (26) also featured. Studies keyworded as *general* included relationship outcomes that looked at improvements in social skills or conflict resolution and negotiation skills, rather than focused on a particular relationship dynamic.

We recorded information about the types of outcomes studied in the research that we judged to be about young people's relationships and this has been coded for the tables below. Table 3.10 groups the different relationship outcomes to give an idea of how many studies recorded particular types of outcomes.

This table raises interesting questions about what sorts of outcomes are relevant and useful in studies

**Table 3.1**

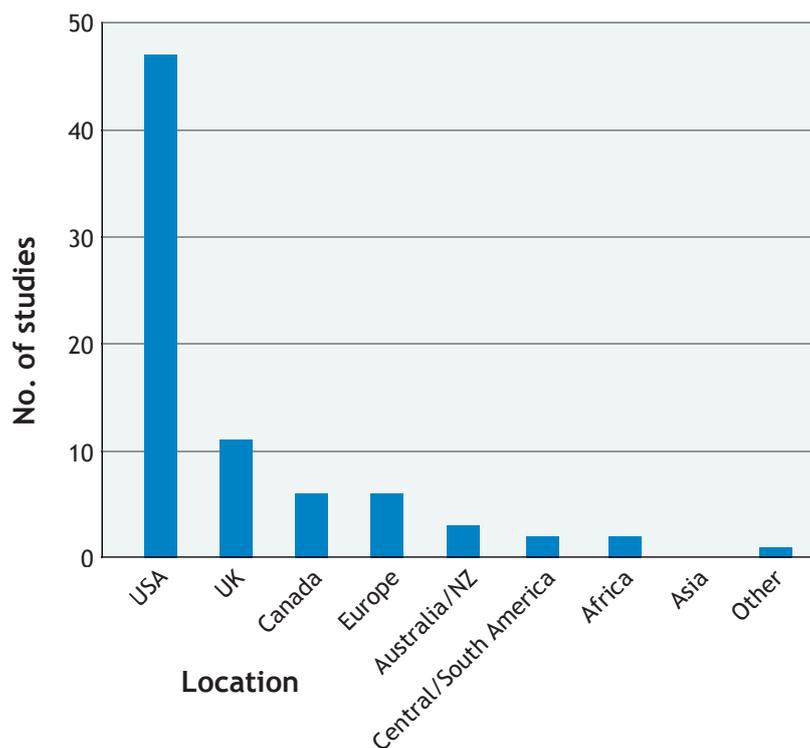
Origin of included papers

	Found	Potential Includes	Systematic Map (Interventions)
ASSIA	30	8	0
SSCI	766	99	4
ERIC	1,313	166	8
PubMed	1,041	126	30
DARE	82	13	0
HealthPromis	158	38	0
Psychinfo	956	110	4
Soc Abstract	1,457	59	5
BEI	124	33	1
Handsearch	53	51	10
Secondary References	86	77	13
<b>Total</b>	<b>6,066</b>	<b>780</b>	<b>75</b>

**Figure 3.2**

Location of the intervention studies

(N=75, not mutually exclusive)

**Table 3.3**

Type of evaluation

Type of evaluation	Number of intervention studies
Researcher-manipulated	59
<i>RCT</i>	18
<i>Other</i>	33
Naturally occurring	16
<b>Total</b>	<b>75</b>

of this kind. In a study designed to address bullying, for example, is it more important to know about 'hard' outcomes, such as incidents of bullying reported to the headteacher or should we be looking at young people's own recollection of incidents that they have experienced in the last week, or their assessment of how safe they feel in school? There are no agreed answers to a question like this. Studies should probably try to collect a range of outcomes that are relevant and then deal with any conflict or ambiguity in the findings.

On the other hand, there are issues about the validity and the utility of different types of outcomes. For example, the headteacher's record of reported incidents may be a good guide to what is actually going on in the school, or may be of poor validity. On the question of utility, an intervention about sexual health may lead to increases in young people's knowledge about contraception measured by a questionnaire but may not have any impact on the use of effective methods. These issues need to be worked out in more detail for specific studies. They are discussed in Chapters 4 and 5 in relation to the in-depth review topic. Table 3.11 shows that the research team judged that around two-thirds of the studies in the map (54/75) had relationships as their main focus, while the remainder were about other types of outcomes like reported drug use.

### 3.3 Identifying and describing studies: quality assurance results

Quality assurance of keywording was established through a moderation exercise. EPPI-Centre team members keyworded the same papers independently. The results were shared with each other and discussed with the rest of the group. Any differ-

ences that arose in the application of keywords were resolved. All papers were then keyworded independently by the Review Team. A random sample of 10 papers were double keyworded by an EPPI-Centre team member to ensure consistency.

### 3.4 Summary of the systematic map

The strengths and limitations of the map are discussed in Chapter 5.

We would suggest that the map is useful in giving an idea of the range of types of intervention studies that have young people's relationships as outcomes. It also allowed us to categorise and discuss the various outcomes. Studies included outcomes reported by young people, and outcomes observed and recorded by others. Outcomes included measures of pupils' knowledge and understanding of an intervention, the skills they may have gained, young people's attributes, feelings and views, and their actions and behaviours. We hope that people doing research in this area will discuss their choice of outcome measures. It would also be helpful for those doing intervention studies to consult with young people and others about which outcomes are most important.

Another possible use for this map is to explore the different features of the school-based interventions that we included. To what extent are interventions delivered by teachers? Are they provided to the whole school or in small groups? What sorts of methods are being used in these interventions. Some of these issues are discussed in more detail in Chapter 4, when assessing the studies contained in the in-depth review.

**Table 3.4**  
Types of learners

	Number of intervention studies
<b>Educational setting (N = 75)*</b>	
Primary school	5
Secondary school	75
Residential school	1
Special needs school	0
Independent school	0
Other	2
<b>Age of learners (N = 75)*</b>	
5-10	6
11-16	74
17-20	10
<b>Sex of learners**</b>	
Mixed sex	72
Male only	2
Female only	1
Not stated	0
<b>Total</b>	<b>75</b>

\* Not mutually exclusive

\*\* Mutually exclusive

**Table 3.5**

Intervention Type

(N=75, not mutually exclusive)

Intervention topic	Number of intervention studies
Health - including drugs, sex, etc.	24
Social or emotional wellbeing	38
Behaviour - including bullying, violence	42
Educational	15
Democracy, citizenship, etc.	7
Other	5

**Table 3.6**

Level at which intervention applied

(N=75, not mutually exclusive)

Level	Number of intervention studies
Wider than the school	10
Whole school	18
Classroom	47
Small group	23
One-to-one	11
Other	8

**Table 3.7**

Intervention delivered by

(N=75, not mutually exclusive)

Delivered by	Number of intervention studies
Peers	20
Teachers/school staff: tutor	20
Teachers/school staff: subject teachers	33
Teachers/school staff: pastoral / head of year	10
Teachers/school staff: other staff e.g. school nurse, school counsellor	17
Outside agencies	17
Other	13

**Table 3.8**

Intervention delivered through

(N=75, not mutually exclusive)

Delivered through	Number of intervention studies
Discussion/argument	40
Activities	35
Drama	19
Books/leaflets/other written	17
Lecture	14
Video/film	13
Games	4
ICT	1
Other	35

**Table 3.9**

Relationship focus

(N=75, not mutually exclusive)

Relationship focus	Number of intervention studies
Friends/peers	42
Teacher-student	26
General	24
Parents/family	21
Girlfriend/boyfriend	7
Other	7

**Table 3.10** Numbers of studies reporting different relationship outcomes  
(N=75, not mutually exclusive)

<b>Reported by young person</b>		
Knowledge and understanding	Strategies for dealing with violence/mediation	3
	Other	6
Skills	Conflict resolution	8
	Refusal/peer pressure	7
	Communication	6
	Other	9
Attributes and feelings	Self-esteem	15
	Safety	5
	Other	18
Views	Bullying, violence, aggression	10
	Relationships, ethos in school	9
	Non-violent strategies	5
	Other	15
Actions, behaviour and events	Violence, behaviour bullying	12
	Talking about sex/drugs/alcohol	8
	Other	9
<b>Reported, observed or recorded by others</b>		
Knowledge and understanding	—	
Skills	Communication	2
	Social skills	1
Attributes and feelings	Status/ confidence	2
	School atmosphere	1
Views	Acceptance of those with special needs	2
Actions, behaviour and events	Violence, behaviour bullying	12
	Attendance	3
	Grades	3
	Other	6

**Table 3.11**  
Main outcome focus of study  
(N=75, not mutually exclusive)

<b>Focus</b>	<b>Number of intervention studies</b>
Young people's relationships	54
Other	21
<b>Total</b>	<b>75</b>

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## CHAPTER FOUR

# In-depth review

This chapter looks at the results of a small subset of the studies in the map. It asks the question: *Do planned educational interventions in conflict resolution skills, negotiation skills and peer mediation improve young people's personal and social relationships?*

### 4.1 Selecting studies for the in-depth review

Ten studies were identified for the in-depth review and are shown in Box 4.1. They were selected from the studies in the map by applying further inclusion criteria (see section 2.3.1). These comprised:

- studies that included control groups
- studies published since 1994
- studies evaluating interventions that included either peer mediation or training in negotiation and conflict resolution skills, or both

The studies are described in detail in Appendix 4.2.

We had not set out specifically to investigate studies of conflict resolution and peer mediation at the beginning of the review. However, as noted in section 3.2 (Table 3.10), the 75 studies in the systematic map covered a very broad range of relationship outcomes, including changes in knowledge and understanding, skills, personal attributes and feelings, views and behaviour. Since there was so little coherence between the outcomes of all the studies, we chose instead to focus on a small group of studies which evaluated *interventions of a particular type*.

We judged that interventions involving conflict resolution, negotiation and mediation skills would be of particular interest and potential relevance to school students and their teachers. There are currently many new initiatives taking place in the UK, primary and secondary schools, promoting 'restorative' approaches to resolving conflict within the school community. These initiatives are expanding and gaining in popularity as more teachers and students are trained in these approaches, including peer mediation and conflict resolution strategies.

The use of restorative approaches, especially when employed within a whole-school context, are generally assumed to facilitate positive relationships among students and reduce conflict. It is also believed that training students to use restorative approaches has a lasting impact on their behaviour and strategies for dealing with conflict (e.g. Youth Justice Board, 2005). Yet, while there is certainly some evaluation of restorative justice initiatives in schools, to the best of our knowledge no-one has conducted an up to date, systematic review of the evidence from well-controlled studies relevant to this field.

In choosing to focus on this group of studies, we were compelled to reject others. For example, we decided not to conduct an in-depth analysis of studies that were solely directed towards evaluating 'violence prevention' initiatives. 'Violence prevention' is a concept which is often narrowly defined and operationalised. The success of a violence prevention intervention is frequently measured in terms of reduction in incidents of physical aggression, fighting or use of weapons. We felt that such studies did not accurately reflect our much broader research interest in interventions which might improve young people's relationships in UK schools.

However, there is obviously considerable overlap between interventions focused on violence prevention, and those concerned with conflict resolution. For example, a current study by Meyer and colleagues (2004), which is yet to report, includes conflict resolution within a violence prevention curriculum. Following our decision to reject studies which investigated 'violence prevention', it emerged that four of our selected studies on conflict resolution, negotiation and peer mediation did in fact employ many violence-related outcome measures (such as reported episodes of violence or intention to use violence). These studies remained

in our in-depth review but were judged to provide only a medium weight of evidence, rather than a high weight of evidence, for our review question (see section 4.4). In the same way, studies of anti-bullying strategies were checked to see if they included peer mediation of conflict resolution.

We also considered and rejected further analysis of studies focusing on sexual relationships and sexual health interventions in schools. These included studies of AIDS and HIV prevention programmes and interventions aimed at reducing teenage pregnancy. Again, these studies were seen as having a specific topic focus which, although clearly relevant to young people's relationships, was too narrow to reflect our research interests. The same argument applied to the smaller number of studies which focused upon preventing drug and alcohol abuse.

## 4.2 Comparing the studies selected for in-depth review with the total studies in the systematic map

The studies in the systematic map were included because they reported evaluations of school-based interventions that aimed to have an impact on young people's relationships. For the in-depth review, we took a more focused approach and looked within the map for those studies that had evaluated interventions of a particular type. Using the further criteria described above, we selected only recent interventions that included either peer mediation or training in conflict resolution skills or both. All the selected studies used control groups, to allow the possibility of making valid comparisons between outcomes for students who had or had not received the intervention. All were judged by the Review Team to have outcomes focusing primarily on young people's relationships. Further details of the relationships outcomes appear in the next section. Tables comparing the studies in the in-depth review with those in the map are in Appendix 4.1.

## 4.3 Further details of studies included in the in-depth review

Full details of all the included studies are contained in the summary tables in Appendix 4.2. Seven studies were conducted in the USA, two in Canada and one in Australia. Although a few relevant UK studies were found, none of them met all the inclusion criteria. An evaluation of the English Restorative Justice in Schools Programme (Youth Justice Board, 2004) was not available in time to include it in the review but this is discussed in Chapter 5.

### 4.3.1 Details of the intervention

Table 4.1 and Appendix 4.2 show details of the intervention in each of the 10 studies in the in-depth review. Six studies included peer mediation as part of the intervention (Johnson et al., 1997;

### Box 4.1 Studies in the In-depth Review

Bosworth K, Espelage D, DuBay T, Daytner G, and Karageorge K (2000) Preliminary Evaluation of a Multimedia Violence Prevention Program for Adolescents. *American Journal of Health Behavior* 24 (4):268-280

DuRant RH, Barkin S, Krowchuk DP (2001) Evaluation of a peaceful conflict resolution and violence prevention curriculum for sixth-grade students *Journal of Adolescent Health* 28 (5): 386-393A. D. Farrell and A. L. Meyer. The effectiveness of a school-based curriculum for reducing violence among sixth grade students. *American Journal of Public Health* 87:979-984, 1997.

Johnson D W, Johnson R, Dudley B, Mitchell J, and Fredrickson J (1997) The impact of conflict resolution training on middle school students. *Journal of Social Psychology* 137 (1):11-22

Stevahn L, Johnson D W, Johnson R T, Laginski A M, and O'Coin I (1996) Effects on high school students of integrating conflict resolution and peer mediation training into an academic unit. *Mediation Quarterly* 14 (1):21-35

Stevahn L, Johnson D W, Johnson R T, Green K, and Laginski A M (1997) Effects on High School Students of Conflict Resolution Training Integrated Into English Literature. *Journal of Social Psychology* 137 (3):302-315

Stevahn L, Johnson D W, Johnson R T, and Schultz R (2002) Effects of Conflict Resolution Training Integrated Into a High School Social Studies Curriculum. *Journal of Social Psychology* 142 (3):305-33

Orpinas P, Kelder S, Frankowski R, Murray N, Zhang Q and McAlister A (2000) Outcome evaluation of a multi-component violence-prevention program for middle schools: the Students for Peace project. *Health Education Research* 15 (1):45-58

Smith S W, Daunic A P, Miller M D and Robinson T R (2002) Conflict resolution and peer mediation in middle schools: extending the process and outcome knowledge base. *Journal of Social Psychology* 142 (5):567-586

Soutter A and McKenzie A (1998) A Evaluation of the dispute resolution project in Australian secondary schools *School Psychology International* 19 (4): 307-316

Orpinas et al., 2000; Smith et al., 2002; Souttar and McKenzie, 1998; Stevahn et al., 1996, 2002), but it appears that only three put this into practice by setting up a peer mediation system in school. In one further study (Farrell et al., 2001) peer mediation was available in both the intervention and control group. The other three studies (Bosworth et al., 2000; DuRant et al., 2001; Stevahn et al., 1997) apparently provided training in conflict resolution but not peer mediation.

It makes sense to implement peer mediation only

**Table 4.1** Summary tables - Interventions

	Bosworth	DuRant	Farrell	J&J	Orpinas	Smith and Daunic	Soutter and McKenzie	Stevahn 1997	Stevahn 1996	Stevahn 2002
<b>Peer mediation</b>	No	No	No - Present, but in both intervention and control	Yes, taught	Yes - taught and organised	Yes - taught and organised	Yes - organised	No	Yes, taught	Yes, taught
<b>Conflict resolution</b>	Yes - including computer aided dispute resolution	Yes	Yes	Yes	Yes	Yes	Unclear	Yes, integrated	Yes, integrated	Yes, integrated
<b>Other components</b>	Anger Empathy	Anger Violence	Anger Violence Stress	Empathy	Anger Violence Empathy	Anger Violence	Unclear	Empathy	Empathy	Empathy
<b>Intensity</b>	Low	Medium	High	Medium	High	Medium	Low	Low	Low	Low
<b>Delivery</b>	Computer only	Teaching practical/roleplay worksheets	Teaching practical/roleplay worksheets	Teaching practical/roleplay	Teaching	Teaching	Unclear	teaching practical/roleplay worksheets notebooks	teaching practical/roleplay	teaching practical/roleplay
<b>Whole school? Theory</b>	No	No	No	No	Yes	Yes	Yes	No	No	No
	Social learning theory	Social cognitive theory	Social cognitive theory	Conflict resolution theory	Social cognitive theory	Not explicit	Not explicit	Johnson and Johnson's conflict resolution theory	not explicit	Johnson and Johnson's conflict resolution theory
<b>Age group/grade</b>	Grades 6-8 age 11-14	6th grade age 11-14	6th grade	Grades 5-9	Middle schoolage 11-14	Middle schoolage 11-14	Secondary school mainly aged 14-16	Grade 9	Grade 9	Grade 9

within a programme that teaches about conflict, so we would not expect to find studies in which peer mediation was evaluated on its own, although in Soutter and McKenzie's 1998 study the report is not clear on this point. No study that we found assessed the impact of *adding* peer mediation to an existing conflict resolution programme, so we do not have the evidence in this review to assess the specific impact of peer mediation on young people's relationships.

In most of the studies, the interventions were delivered during health education classes, 'homeroom' sessions or in addition to the usual timetable. In the three studies by Stevahn et al. (1996, 1997, 2002), conflict resolution training was integrated into the academic curriculum (English Literature in two cases and Social Studies in the third).

### 4.3.2 Relationship outcomes

The ten studies varied considerably in the outcome measures that they used to assess the effectiveness of the interventions. These ranged from reported episodes of violence through to young people's attitudes towards disputes. The majority of studies (7) included follow-up beyond the end of the study, ranging from three months to two and a half years. Three studies did not conduct any long-term follow-up. Table 4.2 summarises the relationship outcomes that were measured in the studies.

### 4.3.3 Evaluation designs

Seven of the ten studies used random allocation to generate the intervention and control groups. Those that did not (or did not say how the intervention group was selected) were DuRant et al. (2001), Smith and Daunic (2002), and Soutter and McKenzie (1998).

In two of the randomised studies (Stevahn et al. 1996, 1997) students were allocated at random to the intervention or control class. In the other five studies (cluster design), the unit of allocation was either the school (Orpinas et al., 2000) or the class (Bosworth et al., 2000; Farrell et al., 2001; Johnson et al., 1997; Stevahn et al., 2002). Numbers of clusters in these studies were mostly small (4 to 27).

Farrell et al. (2001) point out that having students within the same school assigned to intervention and control groups introduces the possibility of diffusion effects (Farrell et al., 2001, p 461). Because students from different classes within a school interact with each other during breaks, if students in the intervention group reduce their rate of fighting, this may also have the effect of reducing the rate of fighting in the control group.

For this reason, research designs in which entire schools, rather than classes, are randomly assigned to different conditions would arguably provide a the best basis for assessing the effect of interven-

tions. However, such projects are both difficult and expensive to implement. It is notable that only one of the studies cited above used the school as a unit of allocation (Orpinas et al., 2000, in which eight middle schools participated).

## 4.4 Weight of evidence for studies included in in-depth review

### 4.4.1 Calculation of weight of evidence (WoE)

The weight of evidence (WoE) contributed by each study in the in-depth review was assessed through careful assessments of each published report by two independent reviewers, followed by discussion and resolution of any discrepancies. Our judgements were based on our data extractions and on detailed re-reading of each report.

Weight of evidence A derived from the detail of the data extraction. It was a measure of the overall soundness of the study in terms of internal methodological clarity and coherence.

Weight of evidence B was determined by the methodology used to evaluate the intervention. All the studies employed experimental designs including control groups, but not all were randomised controlled trials. We scored randomised controlled trials as High and other designs as medium.

We decided to break down weight of evidence C into two parts (i) *setting and sample* and (ii) *relevance of outcomes*. None of the studies were carried out in the UK and the population (schools and students) studied were quite varied, ranging from urban American middle schools with a diverse ethnic and social mix to suburban Canadian high schools catering predominantly to white, middle-class students.

We discussed the extent to which these various settings were relevant to our review. Which, if any, would be most relevant to British students and teachers? The Review Team came to the conclusion that there was no basis for saying that any of the settings was more or less relevant than another. All the interventions had taken place in schools with students within the age-range specified for our review. Therefore we rated WoE C (i) as 'high' for all studies.

To determine WoE C (ii), we looked in more detail into the outcomes of the studies. These fell into two types. In four studies (Boswell, DuRant, Farrell, and Orpinas) almost all outcomes were specifically violence related, including measures such as the impact of the intervention on students' beliefs supportive of violence, or intention to use non-violent strategies. Because of their rather narrow focus on violence prevention, we rated these studies as having medium weight of evidence for our review.

**Table 4.2** Types of relationship outcome measured in the in-depth review

Outcome type	With longer-term follow-up	No longer term follow-up
Understanding and retention of relevant conflict resolution, negotiation or peer mediation techniques	Farrell et al. (6 months ; 12 months) Stevahn et al. (1996) (13 weeks) Stevahn et al. (1997) (7 months) Stevahn et al. (2002) (7 months) Smith et al. (2½ years)	Johnson et al.
Attitudes towards conflict; beliefs supportive of violence; intentions to use violent or non-violent strategies in future	Farrell et al. Orpinas et al (2 years) Stevahn et al. (1996) Stevahn et al. (1997) Stevahn et al. (2002) Smith et al. Soutter and McKenzie (2 years)	Johnson et al. Bosworth et al. DuRant et al.
Ability to apply conflict resolution or negotiation skills in hypothetical situations	Farrell et al. Stevahn et al. (1996) Stevahn et al. (1997) Stevahn et al. (2002)	Johnson et al. DuRant et al.
Ability to apply conflict resolution or negotiation skills in more realistic classroom situations	Stevahn et al. (1996) Stevahn et al. (1997) Stevahn et al. (2002)	
Self-reports of aggressive behaviour, e.g. fighting; injuries due to fighting	Farrell et al. Orpinas et al	Bosworth et al. DuRant et al.
School reports of disciplinary violations; suspensions	Farrell et al. Smith et al. Soutter and McKenzie	
Academic achievement, retention of academic learning	Stevahn et al 1996 Stevahn et al 1997 Stevahn et al 2002	
Perceptions of safety in the school environment	Orpinas et.al.	
Qualitative evidence of effectiveness of intervention for students (e.g. enhanced self-esteem) and teachers (e.g. reduced workload)	Soutter & McKenzie	

The remaining six studies measured outcomes which were less specific and had the potential to be applied in various social situations: for example, whether students had successfully learned and retained a series of negotiating skills. We judged these outcomes to be more broadly relevant to our review question about improving young people's relationships, and therefore gave them a high weight of evidence.

The overall WoE D was taken as the lowest of any of the weights given to A, B or C.

Table 4.3 shows that two studies (Smith et al., 2002; Soutter and McKenzie, 1998) scored low on overall weight of evidence and these studies were therefore excluded from the final synthesis of evidence. The next two sections describe in more detail the studies rated high and medium respectively.

#### 4.4.2 Description of the four studies with high weight of evidence

**Johnson et al. (1997)** examined the effectiveness of a conflict resolution-training programme in an American Midwestern middle school during the 1993-94 academic year. Participants were 176 students in grades 5 to 9. The authors describe the participants as all 'white' and from middle-class backgrounds. The students were heterogeneous in academic achievement with a number of gifted, learning disabled, and special education students in each class.

A pre-test/post-test control group experimental design was used. Participants were allocated randomly into intervention (N=116) or control (N=60) groups. Pre- and post tests were administered to both groups, comprising the 'How I manage conflicts' measure (which assesses knowledge of negotiation and mediation procedures, and willingness to use them) and the Conflict Scenario measure (which presents hypothetical conflicts, such as

**Table 4.3** Weight of evidence

Study	A	B	C	D
Bosworth	Medium	High	Medium	Medium
DuRant	Medium	Medium	Medium	Medium
Farrell	High	High	Medium	Medium
Johnson	High	High	High	High
Orpinas	High	High	Medium	Medium
Smith	Low	Medium	High	Low
Soutter	Low	Medium	High	Low
Stevahn 1997	High	High	High	High
Stevahn 1996	High	High	High	High

gaining access to a shared computer or betrayal of confidences by a classmate). The school-based intervention consisted of 14 hours of training conducted during homeroom periods, each lasting 25 minutes. The training combined integrative negotiation and perspective reversal procedures. The integrative negotiation components focused students on finding a mutually satisfying solution to a conflict, and the perspective-reversal procedure focused them on viewing the conflict from both points of view. Co-operative learning techniques were used to teach the nature of conflict, how to engage in integrative negotiations, and how to mediate schoolmates' conflicts, through the use of step-by-step procedures. The control group received no training. Although peer mediation techniques were taught, the school did not set up a peer mediation structure as part of the study.

The results indicated that students in the intervention group had successfully learned the negotiation procedures. Before training, most students in both groups used strategies other than negotiation to resolve their conflicts. One week after the end of training, over 75% of the students in the intervention group listed 100% of the negotiation steps as the procedure they would use to resolve their conflicts. In the control condition, the number of negotiation steps known before and after the training did not change significantly. There were no significant differences among grade levels or between boys and girls on this measure.

The students also demonstrated the ability to apply the negotiation procedures to resolve conflicts. This was measured through their written responses to hypothetical conflict scenarios. Before training, the students' dominant strategies were telling the teacher, commanding the other to give in, and physical force. There was only one attempt to negotiate a solution by any student. After training, 34% of students in the experimental group used negotiation as their major strategy in the computer access conflict, and another 22% proposed alternative agreements without indicating the steps of negotiation. Only one student did so in the control condition. Again, there were no significant differences among grade levels or between boys and girls on this measure.

For this review, the study was rated as high for its research design, being a randomised controlled trial, and high for its relevance to the review question on account of its broad focus on relationship outcomes, contributing a high overall weight of evidence.

**Stevahn et al. (1996)** studied the effectiveness of conflict resolution and peer mediation training among middle-class high school students in Ontario, Canada. The training was integrated into the academic curriculum. Forty-two ninth-grade students participated in the study. The students were heterogeneous in academic achievement, with a number of gifted and special needs students in each class. The ethnicity of the participants is not stated.

The students were randomly assigned to one of two classes. One class constituted the experimental condition, in which conflict resolution and peer mediation training were integrated into an English literature unit consisting of 10 sessions (total instruction time of 10 hours). The other class in each study constituted the control condition, in which the identical English literature curriculum was taught without the integration of conflict resolution and peer mediation training.

Immediately before training, students in both classes were given premeasures, comprising the 'How I manage conflicts' measure, the Conflict Scenario Measure and the 'What conflict means to me' measure.

In the control condition, students read a novel and completed notebook assignments, working individually. In the intervention condition, students read the same novel alone but worked in pairs to complete their notebook assignments. Additionally, these pairs of students identified and described conflicts between the characters occurring in the novel, scripted what each character would say if he or she were using an integrative negotiation procedure to resolve the conflict, and role-played the procedure. The class teacher taught and demonstrated the six-step negotiation procedure and a four-step peer mediation procedure, drawn from

'Teaching students to be peacemakers' (Johnson and Johnson, 1995).

This study aimed to examine the impact of conflict resolution and peer mediation training on academic achievement; knowledge of negotiation procedures; retention of negotiation procedures; ability to apply the negotiation procedures in conflicts, and changes in attitudes towards conflict.

The results indicated that students in the intervention class learned the negotiation procedure more completely than untrained students. When training ended, 76% of students in the experimental condition accurately recalled all the negotiation steps and a further 5% recalled nearly all the steps, while, in the control condition, 89% listed zero steps. On a retention test, 13 weeks later, 62% of students in the experimental condition recalled all of the negotiation steps and an additional 19% recalled nearly all the steps, while, in the control condition, 88% of students listed zero steps.

Students in the experimental condition also managed hypothetical conflicts more constructively than those in the control class. Prior to the intervention, no student in either condition attempted to use negotiation to resolve a conflict. After training, students in the intervention class showed greater willingness to use negotiation as their major strategy for dealing with conflict (48%), whereas students in the control class continued to deal with conflict by telling the teacher or by forcing concessions. Students in the intervention class also developed more positive attitudes towards conflict than their control-group peers.

The results also suggested that combining conflict resolution and peer mediation training with the study of a novel in English literature had a positive effect on students' academic achievement, measured by achievement tests when training ended, and thirteen weeks later. The authors suggest that practising the conflict resolution and peer mediation procedure by role-playing the major conflicts in the novel increased students' understanding and retention of the novel.

For this review, the study was rated as high for its research design, being a randomised controlled trial, and high for its relevance to the review question on account of its broad focus on relationship outcomes, contributing a high overall weight of evidence.

In a similar study published the following year, **Stevahn et al. (1997)** again studied the effectiveness of conflict resolution training when integrated into the English literature curriculum in a suburban Ontario high school. This study used the same design, materials and methodology as the previous (1996) study. Participants were 40 ninth-grade students from middle-class backgrounds. The students were heterogeneous in academic achievement, with a number of gifted and special needs students

in each class. The ethnicity of the participants is not stated.

This study replicated the procedures used in the 1996 study, with some minor changes. The intervention took place over eight class sessions instead of 10 (total instruction time of 9.5 hours). It included the same integrative negotiation procedure, but apparently not the peer mediation procedure. The Conflict Scenario measure was administered prior to the intervention, but not the 'How I manage conflicts' measure. Both measures were administered immediately after the intervention. Seven months after the intervention, the 'How I manage conflicts' measure was readministered, as a measure of long-term retention of the negotiation procedure, but there was no further academic achievement test.

This study aimed to examine the impact of conflict resolution training on: academic achievement; knowledge of negotiation procedures; retention of negotiation procedures; and the ability to apply the negotiation procedures in conflicts.

The results supported those of the previous (1996) study, suggesting that students in the intervention class learned the negotiation procedure more completely than untrained students. When training ended, 85% of students in the experimental condition accurately recalled all the negotiation steps and the remaining 15% recalled four of the six steps, while, in the control condition, 70% listed no steps, and the remainder one or two steps. Following the post-test, students in the control condition were taught the integrative negotiation procedure in two class sessions. On the retention test seven months later, 75% of students in the experimental condition remembered three or more of the steps, whereas 30% of students in the control condition did so.

Before training, no student in either condition attempted to use negotiation to resolve a conflict. After training, students in the experimental condition were significantly more likely to handle conflicts more constructively. They showed greater willingness to use negotiation as their primary strategy for dealing with the computer access conflict (75%) and the classmate betrayal conflict (85%). Students in the control class continued to deal with conflict by telling the teacher or by forcing concessions, and no-one used negotiation. Again, these results support those of the 1996 study.

For this review, the study was rated as high for its research design, being a randomised controlled trial, and high for its relevance to the review question on account of its broad focus on relationship outcomes, contributing a high overall weight of evidence.

In a subsequent study, **Stevahn et al. (2002)** aimed to extend the findings of their previous research

on the integration of conflict resolution and peer mediation training into the academic curriculum. Their previous studies had been conducted in English literature units; the researchers now wished to determine whether the same effects would emerge when the training was integrated into other subject areas. The previous studies had been conducted with Canadian students; this study aimed to replicate the results with US students. The researchers had previously measured only the short-term retention of academic material. They now wished to measure long-term retention. Finally, the researchers wished to examine whether the use of conflict procedures taught in one academic area would transfer to the analysis of conflicts in another academic area (where the procedures were not taught or emphasised). They had not addressed this issue in their earlier research.

This study took place in a Californian suburban high school, which drew upon diverse neighbourhoods. Four ninth-grade classes (each with between 20 and 25 students) participated. The participants were middle class and heterogeneous in academic achievement, with a number of gifted and special needs students in each class. The ethnicity of the participants is not stated.

Two classes were randomly assigned to receive five weeks of conflict resolution and peer mediation training integrated into a required social studies curriculum (the World Civilization course). The remaining two classes studied the same social studies curriculum for an identical period of time without the conflict resolution and peer mediation training. Classes met every other day for 105 minutes. Total instruction time was 17.5 hours.

The training consisted of three parts, once again based on the earlier work of Johnson and Johnson (1995): (a) what constitutes conflict; (b) how to negotiate an integrative agreement using a six-step procedure; and (c) how to mediate conflicts between schoolmates, using a four-step procedure. Pre- and post-measures administered just before and after the intervention comprised the 'How I manage conflicts' measure; the Conflict Scenario Measure; an integrative bargaining measure designed to assess the degree to which students engaged in distributive versus integrative negotiations (over monetary profits and vacation hours); a measure of attitudes towards conflict; and an academic achievement test. There was also a team project, conducted towards the end of the course, to measure student behaviour in a real conflict with a classmate. Retention measures were administered three weeks after the intervention and again seven months later.

This study aimed to examine the impact of conflict resolution and peer mediation training on academic achievement and learning (including transferability of skills to a different academic area); knowledge of negotiation procedures; retention of negotiation procedures; ability to apply the negotiation

and peer mediation procedures in conflicts; and changes in attitudes towards conflict.

Results supported those of the previous studies, suggesting that the trained students, compared with the untrained students, learned the integrative negotiation and peer mediation procedures better. Before training, only five of all participating students knew one or two negotiation steps. After training, 92% of the trained students recalled all or nearly all the negotiation steps, while 93% of the untrained students listed zero steps. At seven months, there was still a significant difference between the trained and the untrained students' knowledge of the negotiation procedure.

With regard to the ability to apply negotiation procedures, there were no significant differences between the experimental and control groups before training. After the intervention, however, trained students were able to apply the procedures more completely, and were more likely to choose an integrative over a distributive approach to conflict. In the computer access and classmate betrayal scenarios, trained students used an average of three to four negotiation steps to resolve the conflict, whereas untrained students used none. In the team project task, 59% of trained student pairs used integrative negotiation to reach an agreement, compared with 9% of untrained student pairs. In the integrative bargaining tasks, trained pairs performed significantly better than untrained pairs, reaching agreements which yielded higher joint monetary profits and more vacation hours.

When students were presented with two further conflict scenarios (queue jumping and friendship problems), trained students were far more likely to propose peer mediation solutions compared with untrained students (57% against none and 49% against none respectively).

At post-test, trained students showed a significantly more positive attitude towards conflict than their untrained peers. The trained students also demonstrated higher achievement, greater long-term retention of the academic learning in their social studies unit, and greater transfer of academic learning from the social studies curriculum to a subsequent English literature exam focusing on conflicts in *Romeo and Juliet*.

For this review, the study was rated as high for its research design, being a randomised controlled trial, and high for its relevance to the review question on account of its broad focus on relationship outcomes, contributing a high overall weight of evidence.

The findings of the three studies conducted by Stevahn et al. (1996, 1997, 2002) suggest the feasibility and beneficial impact of integrating conflict resolution and peer mediation training into the academic curriculum for whole class groups. The similarity between the findings of the three

studies, which were conducted in more than one country, lends weight to the generalisability of their results.

#### 4.4.3 Description of four studies with medium weight of evidence

**Bosworth et al. (2000)** developed and evaluated a computerised violence prevention programme known as SMART Talk (Students Managing Anger and Resolution Together). The aim of SMART TALK is to engage young adolescents through games, simulations, cartoons, animation and interactive interviews, enabling them to learn new ways of resolving conflict without violence. The programme comprises three modules: 'Anger Management', 'Dispute Resolution' and 'Perspective Taking'. Each module aims to provide adolescents with the skills, information and the decision-making support they need to make informed lifestyle choices based on conflict resolution rather than violence.

This evaluation was conducted in a middle school serving a large Midwestern American metropolis with an economically diverse population. Participants were sixth- to eighth-graders, aged between 11 and 14. Twelve percent of the student population was bussed from the inner city and 29% of study participants were receiving free or reduced-price lunches. The sample was classified as Caucasian (84%), African American (9%), biracial (4%) or 'other' (4%).

The study comprised a cluster-randomised trial with nine clusters, six of which were assigned to the intervention group and three to the control group. Each school grade comprised three 'teams' of 100 to 140 students. Students had been assigned randomly to their teams at the beginning of the school year. For evaluation purposes, two teams in each grade were randomly assigned to the intervention group and one to the control group. Assignment at team level helped to minimise contamination that might have resulted from intervention and control participants attending classes together.

Students in the intervention and control groups completed a survey prior to the intervention and three months later. The survey measured demographic, psychosocial and environmental factors; aggressive and other violence-related behaviours; and satisfaction with SMART Talk. The initial survey was completed by 558 students and the follow-up by 538.

Students in the intervention group had access to SMART Talk for the whole of one semester (January to April 1995). They used SMART Talk independently during class time for some classes, or during free time. With the exception of 17 pairs of students, who were assigned to SMART Talk to resolve specific conflicts, use of the programme was voluntary and not connected to assignments or class work. Data

on each user's path through the programme was collected unobtrusively by the computer.

Five outcome measures were selected for analysis because of their hypothesised association with violence in the research literature. These included self-awareness (awareness of own responses in conflict situations), beliefs supportive of violence, self-efficacy (confidence to use non-violent strategies), intentions to use non-violent strategies in future conflicts, and self-reported aggressive behaviour.

At baseline, there were no significant differences between the groups on demographic variables or on the five dependent measures. The results indicated that there was a marginally significant increase in self-awareness and intentions to use non-violent strategies among students in the intervention group, with a slight decrease amongst those in the control group. Students in the intervention group were also less likely to value violence as a solution to a conflict, compared with their control-group peers. However, there were no significant changes in the frequency of self-reported aggressive behaviour over time between the groups.

For this review, the study was rated as high for its research design, being a randomised controlled trial. However, it was rated medium in terms of relevance to the review question on account of its specific focus on outcomes about violence. The overall weight of evidence was therefore rated as medium.

**DuRant et al. (2001)** evaluated 'The peaceful conflict resolution and violence prevention curriculum' in four middle schools in Augusta, Georgia, USA. The 13-module curriculum is a skills-building curriculum based on social cognitive theory. It teaches identification of situations which could result in violence; avoidance, confrontation, problem-solving and communication skills; conflict resolution skills; the conflict cycle; the dynamics of a fight; and how to express anger without fighting. Each module is designed for use in a health education classroom setting and lasts approximately 50 minutes. The curriculum combines information, written exercises and role-play, including corrective feedback to students.

Schools with similar demographic characteristics were selected for this study from different parts of the county. The sample consisted of students in the sixth grade. However, students' ages ranged from 11 to 14 years. Forty-one percent lived in public housing, and 80% lived in homes with an employed head of household. The authors describe the participants as 'predominantly' African American.

The evaluation used a quasi-experimental pre-test/post-test control group design. Two schools received the intervention (N=292) and two were control schools (N=412).

**Table 4.4** Intervention and outcome type for the eight studies in the synthesis

Outcome type	Included peer mediation fully implemented	Included peer mediation taught only	No peer mediation
Understanding and retention of relevant conflict resolution, negotiation or peer mediation techniques		Johnson et al 1997 Stevahn et al 1996 Stevahn et al 2002	Stevahn et al 1997 Farrell et al 2001
Attitudes towards conflict; beliefs supportive of violence; intentions to use violent or non-violent strategies in future	Orpinas et al 2000	Johnson et al 1997 Stevahn et al 1996 Stevahn et al 2002	Stevahn et al 1997 DuRant et al Farrell et al 2001 Bosworth et al
Ability to apply conflict resolution or negotiation skills in hypothetical situations		Johnson et al 1997 Stevahn et al 1996 Stevahn et al 2002	DuRant et al Farrell et al Stevahn et al 1997
Ability to apply conflict resolution or negotiation skills in more realistic classroom situations		Stevahn et al 1996 Stevahn et al 2002	Stevahn et al 1997
Self-reports of aggressive behaviour, e.g. fighting; injuries due to fighting	Orpinas et al. 2000		DuRant et al Farrell et al 2001 Bosworth et al
School reports of disciplinary violations; suspensions			Farrell et al 2001
Academic achievement, retention of academic learning		Stevahn et al 1996 Stevahn et al 2002	Stevahn et al 1997
Perceptions of safety in the school environment	Orpinas et.al. 2000		

Pre-test questionnaires were administered to all participants two weeks before the intervention. These assessed the use of violence in the preceding three months (e.g. frequency of carrying a weapon; fighting); use of violence in hypothetical situations; levels of exposure to violence and victimization; and depression. The Peaceful Conflict and Violence Prevention Curriculum was taught once a week for 13 weeks. This was followed by a post-test questionnaire two weeks later.

The results suggest a slight positive short-term effect of the Peaceful Conflict and Violence Prevention Curriculum on self-reported use of violence and intention to use violence. From pre-test to post-test, there was a slight decrease in the reported use of violence by students in the intervention group and an increase in the reported use of violence by students in the control group. Most of the changes were accounted for by changes in the frequencies of carrying concealed guns and fighting resulting in injuries requiring medical treatment. Students in the intervention group did not increase their intention to use violence from pre-test to post-test, whereas students in the control group increased their score on this measure.

For this review, the study was rated as medium for its research design, because it was not a randomised controlled trial, and medium in terms of relevance to the review question owing to its spe-

cific focus on outcomes about violence. The overall weight of evidence was therefore rated as medium.

In an evaluation of the RIPP project (Responding in Peaceful and Positive Ways), Farrell et al. (2001) explored the impact of a violence prevention programme aimed at sixth-grade students in three urban middle schools with over 90% of students from an African-American background. The programme used 'violence prevention specialists' to teach a 25-lesson curriculum which included techniques for dealing with violence and a school-wide peer-mediation strategy. Twenty-seven sixth-grade classes in the three schools were randomly assigned to intervention (N=13) or control (N=14). Comparisons were made of reports of disciplinary incidents, attendance and grade point averages, and self-reported measures of attitudes to violence, involvement in violent behaviour and use of non-violent methods for solving disputes.

The data were collected using self-report measures, including reports of violent behaviour, drug use, knowledge of the intervention materials, attitudes related to violence and endorsement of non-violent methods of dealing with problems. In addition, school records of disciplinary violations were collected. Follow up data was obtained six and twelve months after completion of the programme by readministering the same measures.

**Table 4.5** Study findings at follow up

Outcome type	Positive findings	Neutral
Understanding and retention of relevant conflict resolution, negotiation or peer mediation techniques	Farrell et al., 2001 Stevahn et al., 1996 Stevahn et al., 1997 Stevahn et al., 2002	
Attitudes towards conflict; beliefs supportive of violence; intentions to use violent or non-violent strategies in future	Stevahn et al., 1996 Stevahn et al., 1997 Stevahn et al., 2002	Orpinas et al., 2000 Farrell et al. 2001
Ability to apply conflict resolution or negotiation skills in hypothetical situations	Stevahn et al., 1996 Stevahn et al., 1997 Stevahn et al., 2002	Farrell et al., 2001
Ability to apply conflict resolution or negotiation skills in more realistic classroom situations	Stevahn et al., 1996 Stevahn et al., 1997 Stevahn et al., 2002	
Self-reports of aggressive behaviour, e.g. fighting; injuries due to fighting	Farrell et al., 2001	Orpinas et al., 2000
School reports of disciplinary violations; suspensions	Farrell et al., 2001	
Academic achievement, retention of academic learning	Stevahn et al., 1996 Stevahn et al., 1997 Stevahn et al., 2002	
Perceptions of safety in the school environment	Orpinas et al. 2000	

The authors report intervention effects on the Responding in Positive and Peaceful Ways (RIPP) knowledge test but not on measures of attitudes or the use of non-violent strategies for addressing hypothetical situations. Although the differences in knowledge and views were not significant, intervention students were less likely to report that they had been injured in a fight and more likely to report involvement in peer mediation. Overall, intervention participants had fewer disciplinary violations for violent offences and in-school suspensions at post-test compared with the control group. However, there was some evidence that the intervention had a greater impact on students who reported a higher level of violent behaviour at the start of the project compared with the self-reported frequency of violence among students who reported low pre-test levels. These effects were evident at both the six-month and 12-month follow-up assessment and the reduction in suspensions was maintained at the 12-month follow-up, but only for boys, not for girls.

For this review, the study was rated as high for its research design, being a randomised controlled trial. However, it was rated medium in terms of relevance to the review question on account of its focus on outcomes about violence, and was therefore given an overall weight of evidence of medium.

An evaluation of 'Students for Peace' was conducted by Orpinas et al (2000). 'Students for

Peace' is another multi-component violence prevention curriculum based on social cognitive theory (cf. DuRant, 2001, above). The four main components of the programme include establishing a School Health Promotion Council, to organise and co-ordinate school-wide intervention activities and to influence organisational change at the school level; a violence-prevention curriculum that provides conflict-resolution knowledge and skills; peer mediation and leadership training to modify social norms about violence and to provide alternatives to violence; and parent education via newsletters, presenting role models that parents can emulate at home to reduce conflict and aggression. The overall aim of the programme is to reduce and prevent aggressive behaviour in students.

The evaluation took place in eight American middle schools in the Texas district. The participants were aged between 11 and 14 years. The percentage of students receiving free or reduced-price lunch ranged between 37% and 61% for each school. The majority of students at six of the participating schools (three intervention, three control) were Hispanic (71, 99%), while the majority at the remaining two schools were African-American (60, 62%).

The study employed a hybrid design, including both cross-sectional and cohort analyses. Schools were divided into matched pairs and then one of each pair was randomly assigned to either intervention or control conditions. However, results were ana-

lysed as if matching did not occur. The intervention schools received the Students for Peace curriculum, while the control schools received the district's usual violence prevention activities. School eligibility was determined by non-participation in any other violence prevention study.

All students were evaluated in the spring of 1994, 1995 and 1996 (approximately 9,000 students per evaluation). Intervention effects were assessed on eighth-graders in 1994 and at each follow-up (eighth-graders in 1995 and 1996). Sixth-graders in 1994 were followed through seventh or eighth grade, or both.

At baseline, intervention and control groups did not differ significantly on any violence-related variables, measured on a self-report survey of aggressive behaviour and perceptions of school safety. Results from both the cohort and cross-sectional evaluations suggested that the intervention had little or no effect in reducing aggressive behaviours, fights at school, injuries due to fighting, missing classes because of feeling unsafe at school, or being threatened with harm. For all variables, the strongest predictors of violence in eighth grade were violence in sixth grade and low academic performance. However, the Students for Peace intervention was not able to address exposure to community violence (e.g. children witnessing arrests, gangs, beatings, stabbings and shootings), which the researchers viewed as strongly related to student levels of aggression in this particular study.

For this review, the study was rated as high for its research design, being a randomised controlled trial. However, it was rated medium in terms of relevance to the review question owing to its focus on outcomes about violence. The overall weight of evidence was therefore rated as medium.

## 4.5 Synthesis of evidence

The results of these eight studies do not lend themselves to a statistical meta-analysis in this review because the interventions and outcomes are so varied. Although each study provides some evidence which may enhance our understanding of the review question, this evidence taken as a whole is neither clear nor consistent, especially in relation to student behaviour and discipline. However, the studies do, on the whole, suggest that interventions promoting peer mediation, negotiation and conflict resolution skills produce some positive effects which may endure beyond the end of the intervention. At least, there is sufficient evidence to suggest that further resources should be devoted to implementing and evaluating programmes of this nature.

Returning to the description of the interventions (section 4.3.1) and the types of outcomes measured (section 4.3.2) we can characterise the studies as shown in Table 4.4. This shows that only Orpinas evaluated a fully implemented peer media-

tion strategy, but reported a limited range of outcomes. As the study summary shows, these focused mainly on violence. The studies by Stevahn and colleagues collected the widest range of outcomes and were the only studies that looked at academic achievement.

As shown in Table 4.2 earlier, some studies did not include any follow-up of the effects of the intervention. It seems important to us to know whether a programme has a lasting impact on students, teachers and perhaps the wider family and community. It would be desirable to conduct follow-up evaluation over an extended period of time, but that is expensive in research costs. There are also difficulties over participants who are lost to long-term follow-up, which should be taken into account when evaluating the findings. Participants who drop out frequently differ in significant ways from those who remain in the study. For example, in this review, the study by Orpinas et al. (2000) found that students who dropped out before follow-up 'displayed a poorer profile on the five main outcome variables, as well as on other variables, sometimes by a factor of 2...students who dropped out were also likely to be males and older' (p 52).

Table 4.5 shows the effects of the intervention in the five studies with longer-term follow-up. The timing of follow-up ranged from three months to two years. Overall, Table 4.5 shows that the majority of studies reported positive findings, such as retention of knowledge and skills pertaining to conflict resolution, peer mediation and negotiation, and some lasting effects on discipline and behaviour.

Few negative findings were reported at all in these studies, but in Orpinas et al. (2000), one statistically significant finding was an increase in self-reported 'injuries at school' for boys in the intervention group.

The three studies by Stevahn and colleagues report positive effects in all the outcomes that they set out to measure. For example, students who had taken part in an intervention class knew many more steps of an integrative negotiation procedure than those in the control class, both immediately after intervention and seven months later. The finding of an improvement in marks for the academic assessment of the course within which the programme was embedded is an interesting bonus for the work. A further interesting finding was that skills in analysing conflict were transferred to another academic area after the intervention finished.

Over the course of their research, this team has sought to improve the evaluation of the way that students apply what they have learned. Being able to give correct responses in a hypothetical conflict situation may not translate into a change in behaviour in a real dispute. Yet clearly it is of the greatest importance to teachers and researchers

to know whether interventions do work in 'real life' settings and whether they equip students with transferable skills. The most recent study (Stevahn et al., 2002), for example, set up a team project near the end of the intervention that allowed teachers to pair up students with opposing views about how to teach younger students about a given aspect of the work. Students were asked to find a way to resolve the difference within their pair. This comes closer to a real conflict situation and allows skills to be displayed.

Only two studies in this subset with follow-up examined the impact of the intervention on student behaviour and discipline (Farrell et al., 2001; Orpinas et al., 2000); and only Farrell et al. used school records of behaviour problems (Table 4.5).

The impact of the Students for Peace intervention, evaluated by Orpinas et al. (2000), in a large-scale evaluation involving eight schools, showed only limited effects. The researchers found no impact of the intervention on self-reported aggressive behaviours, fights at school, injuries due to fighting, missing classes because of feeling unsafe at school, or being threatened with harm. The researchers acknowledge that the Students for Peace programme was not able to address exposure to community violence, which they believed was strongly related to student levels of aggression in this particular study.

Farrell et al. (1997) obtained mixed results from their study, but again, on the whole, these were inconclusive. They found few significant differences in either self-reported aggressive behaviour or that recorded by others at six and twelve months. The study did show that students who participated in Responding in Peaceful and Positive Ways reported more frequent use of a peer mediation programme, and reductions in fight-related injuries, immediately after the intervention. The participants were also less likely to have disciplinary code violations and in-school suspensions than those in the control group, and this effect appeared to persist for up to 12 months. However, the differences at 12-month follow-up did not reach statistical significance except in the case of suspension rates for boys. The researchers also acknowledged that the intervention effects on violent behaviour were moderated by initial levels of self-reported violence, benefiting mainly those students with the highest levels.

Both these research teams are taking part in a new multisite violence prevention evaluation which is yet to report (Meyer et al., 2004). This includes conflict resolution strategies within a violence prevention curriculum and is collecting data from students, parents and teachers in 37 schools.

#### **4.6 Summary of findings from in-depth review**

We chose a small subset of the research identified in the map in order to look at one type of inter-

vention - school-based programmes involving peer mediation and negotiation training. We found ten studies that met our criteria. None were from the UK. The analysis of the studies for the in-depth review showed how complex and varied these interventions were. For example, all the studies included some kind of negotiation training and six of the ten added peer mediation to this. However, in some studies the peer mediation was taught and implemented in the school, while in others it was taught but with no evidence from the reports that it had been formally implemented. Some studies focused mainly on violence both in the content of the intervention and in the outcomes assessed. We gave these less weight in the review.

Other key differences between the studies in the in-depth review were the measures used to assess outcomes. These ranged from very concrete outcomes, such as disciplinary offences reported to the school, to measures of students' knowledge and views about conflict. The series of studies by Stevahn et al. have been developing outcomes that might be seen as providing better indications of how classroom negotiation training will feed into the students' ability to negotiate well in other contexts.

As outlined in section 4.5, the findings of the eight studies to which we gave a higher weight of evidence were somewhat mixed and inconclusive, particularly with regard to the two studies which focused on outcomes related to aggression (Orpinas et al., 2000; Farrell et al., 2001). The studies do, on the whole, suggest that interventions promoting peer mediation, negotiation and conflict resolution skills produce some positive effects which may endure beyond the end of the intervention. These include retention of knowledge and skills pertaining to conflict resolution, peer mediation and negotiation, and some lasting effects on discipline and behaviour. Few negative findings were reported at all in these studies. However, the impact of the programmes was sometimes limited or confined to less relevant or more short-term outcomes.

The most promising line of enquiry appears to be the approach taken by Stevahn et al. (1996, 1997, 2002). This team has conducted a series of research studies in which the teaching of conflict resolution and negotiation skills is integrated into the academic curriculum. This intervention has been shown to have positive effects which persist over at least several months, and apparently no negative effects. The findings have been repeated in different academic settings (English literature and Social Studies classes) and with both American and Canadian students. The skills acquired by students have also been demonstrably transferred to real, albeit minor, classroom conflicts. However, so far there has been no fuller assessment of the impact of interventions such as those implemented by Stevahn. For example, we do not know to what extent such interventions influence students' daily relationships with their peers, teachers or families.

We do not know whether they ultimately create safer schools, or help to reduce unresolved and damaging conflict.

The findings of the two studies to focus mainly on aggressive behaviour (Farrell et al., 2001; Orpinas et al., 2000) were inconclusive. However, Orpinas et al. have made some useful suggestions regarding explanatory variables which may account for the apparent lack of impact of this kind of school-based intervention: students' exposure to violence in the community, and parental communication regarding fighting or the use of alternative, more peaceful strategies for conflict resolution. Orpinas et al. were unable to address the issue of exposure to community violence in their own study, but their findings suggest that this may be a powerful explanatory variable that should be taken

into account when designing future school-based interventions.

Secondly, Orpinas et al. found that family-related variables were very strong predictors of student violence. The strongest predictor was parental communication regarding fighting or the use of alternative, more peaceful strategies to resolve conflicts. These researchers attempted to involve parents in their study through newsletters containing information on positive conflict-resolution tactics, and tips on how to reduce their own modelling and reinforcement of aggressive behaviour; however, in the context of Student for Peace, parents were 'a minimal target of the intervention' (Orpinas et al., 2000, p. 55). Their findings indicate that it may be particularly important to find ways of involving parents in school-based interventions.

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## CHAPTER FIVE

# Implications

This chapter looks at the strengths and limitations of the map and the in-depth review, and considers the implications for research and practice.

### **5.1 Strengths and limitations of the systematic review**

#### **5.1.1 Strengths and limitations of the map**

This review has been unusual in involving pupils and teachers in shaping the whole approach of the review. The focus on relationship outcomes would not have come from the research partners in this team but was what the pupils, in particular, wanted. The benefit of this has been to bring together research from different viewpoints and to look carefully at what sort of outcomes are being measured in a range of intervention studies in secondary school settings.

However, the research question for the map was difficult to handle. It was hard to find studies with particular types of *outcome* because most studies are catalogued by the type of intervention they report. We are aware that relevant studies have been missed and we would like to repeat the searches. One way to improve the searching would be to take the existing map and list the types of interventions that appear in it. Then we would develop searches for further studies of those types of interventions using as wide a range of search terms as possible. Another limitation of the map may be that studies of children who were mainly in the primary school age range will have been excluded but could have been useful.

We were also disappointed that there was not time to map and review in depth the studies of young people's views about relationships. This would have been very helpful in pointing out young people's areas of concern and in helping to identify types of interventions that could be searched for and assessed.

#### **5.1.2 Strengths and limitations of the in-depth review**

Our in-depth review is, as far as we know, the only systematic review of these types of intervention. It draws attention to the limitations of the primary research in this field and points the way to further evaluations. We consider that, even though none of the studies was done in the UK, the results of in-depth review are relevant to UK schools. First, learning to deal with conflict in a good way is a need for schools and students everywhere. Second, educational structures and school approaches to issues like conflict already vary a lot within the UK and it is not clear that the Australian, US and Canadian schools in the studies in this review are outside the range found in the UK.

There are a number of factors that limit the usefulness of the in-depth review. First we are aware that some relevant studies have been missed by the searches that we used. The team feels that it would be useful to redo the searches and update the map now that we have a better idea of the range of material that reports research about young people's relationships. This might yield further studies for the in-depth review. Several relevant studies were found too late for inclusion and some studies are due to report soon. The evaluation in England and Wales of the Restorative Justice in Schools Programme (Wilcox and Hoyle, 2004) was published too late to be assessed for inclusion in the review. It included some schools where peer mediation was being used but did not evaluate this component separately.

A second issue for the in-depth review was the limited number of evaluations of good methodological quality. Studies tended to be small and to have no reported sample size calculations. Researchers

were not generally looking for the possibility that interventions might have adverse impacts as well as benefits and there was no discussion about cost effectiveness. Some evaluations were carried out by those who had devised and championed a particular type of intervention. It was disappointing that there were no UK evaluations that met the methodological criteria for this review.

## 5.2 Implications

### 5.2.1 Discussion of findings from the in-depth review

This review can be seen as one part of the complex process of bringing together and reflecting on research evidence in the whole area of young people's wellbeing and relationships within society. Different research teams around the world have taken up different parts of this challenge, but so far only a few systematic reviews have been published and a number are in progress. Using the metaphor of a building, we could say that the review activity so far is not leading to a neat structure with agreed dimensions; there is no overall plan and some people could be seen as working on all the aspects of a single room while the work of others is more like cutting timbers than can be used anywhere. Reviews also differ in their methods, in the types of questions they ask (effectiveness, needs, views) and in the sorts of evidence that is considered suitable to address the questions. In practice, this means that reviews sometimes overlap and that some topics have not been covered at all so far. At the same time there is demand from all sides for knowledge about what are the best approaches.

UK research about conflict resolution and peer mediation in schools has been very limited so far (Baginsky, 2004; Bitel and Roberts, 2003). None of the small number of UK evaluations that we assessed for inclusion in the review used a comparison group. Researchers reported positively on the use of conflict resolution and peer mediation but raise some issues about sustaining the schemes throughout the school, over a period of time (e.g. Inman and Turner, 2001; Sellman, 2002). The question is often raised about whether there is support for the new approaches within the school at all levels (e.g. Baginsky, 2004).

The findings of Stevahn et al. (1996, 1997, 2002) of transferable academic benefits from conflict resolution training within the curriculum fit in well with the main results of a recently published EPPI-Centre review by the Citizenship Review Group (Deakin-Crick et al., 2005) which looked at the impact of citizenship education on student learning and achievement. This found evidence to support an impact of citizenship education on a range of student outcomes, including participation, skills in debate and overall achievement.

### 5.2.2 Implications for collaboration in systematic reviews

The Review Team is in the process of reflecting on the way that the collaboration between EPPI-Centre researchers and the school has worked. From the point of view of the researchers, the relationship with the students and teachers has made a big difference. Even when there was no opportunity to consult directly about something, the contact with the school helped the researchers to keep relevance to the school in mind as they worked. The EPPI-Centre is looking for other opportunities to work with schools in all aspects of the review process from choosing a topic and review question through to improving the readability and relevance of reports of systematic reviews. The Review Team is aware that the findings of the in-depth review may be disappointing for teachers looking for well evaluated, effective programmes to use in schools to address the needs of students in the field of relationships. We would encourage teachers and others to comment on the review and to suggest types of programmes that could be the subject of future primary research and systematic reviews. There may also be new approaches that seem promising and that are being used in schools; it would be good to look for opportunities to collaborate with schools to evaluate these.

### 5.2.3 Implications for policy and practice

- UK Schools that adopt these promising interventions in the area of conflict resolution, negotiation and peer mediation could consider doing so in the context of an evaluation. Such an evaluation could involve many schools, perhaps linked through one of the voluntary networks in this field.
- Conflict resolution, negotiation and peer mediation skills are most effectively learned and retained when integrated into the academic curriculum rather than taught separately. This has already been demonstrated successfully in English Literature and Social Studies classes, but there is plenty of scope in other areas of the curriculum (for example, Religious Education, History, Geography, Psychology).
- Parents should be participants in school-based interventions.
- The community context in which the intervention takes place, especially levels of violence to which students are exposed in the local community, should be taken into account in designing and implementing school-based interventions.

### 5.2.4 Implications of the map for further research

The map could be updated with attention to the search strategy. Improving the searching could involve looking at reports that were identified only

from citations (but not picked up on searches) to see how the original strategy could be improved.

Other in-depth reviews of interventions intended to improve young people's relationships could be carried out from the studies in the map. For example, there are studies that address relationships with different categories of people (e.g. parents, teachers, friends) and studies looking for solutions to problems in relationships (bullying, violence in 'dating' relationships), as well as studies of particular types of intervention.

In addition, UK studies of young people's views about relationships were collected in the searching stage of the project but there was not time to describe them in the map. The searches for these studies should be updated and the studies should be keyworded with a view to identifying areas for in-depth reviews. The way that young people describe their different types of relationships should be compared with the types of relationships used as outcome measures in the intervention studies.

### ***5.2.5 Implications of the in-depth review for further research***

- In order to evaluate the impact of peer mediation and conflict resolution in UK schools, we would suggest that entire schools be allocated at random to intervention and control conditions with three arms: Conflict Resolution with Peer Mediation, Conflict Resolution only and Control Group with no intervention. Such a trial would need to have enough clusters to provide sound answers. A wide range of outcomes should be assessed with an adequate length of follow-up. (It seems important to us to know whether a programme has a lasting impact on students, teachers and perhaps the wider family and community.)
- Involve school students in the design and evaluation of interventions. Take into account the influence of parents and the community, and involve them in study design, implementation and evaluation.
- Promote good practice in evaluation so that scepticism is the rule and evaluations are not led by those who may have an interest in the marketing of products to do with the intervention. Consider the possibility that interventions may do more harm than good.
- Extend the present review by mapping young people's views; update the map with recent studies; develop methodological work on outcomes and on search strategies; and do further in-depth reviews (e.g. studies that have as one of their outcomes young people's relationships with their families).
- Develop more opportunities for working on systematic reviews in collaboration with students and teachers.

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## Appendix 1.1: Authorship of this report

This work is a report of a systematic review conducted by the Personal, Social and Health Education (PSHE) school-based review group.

The authors of this report are

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Kelly Dickson (EPPI-Centre)  
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The PSHE Review Group

They conducted the review with the benefit of advice and active participation from the members of the review group.

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### **Conflicts of interest**

All members of the team were young once or still are.

### **Acknowledgements**

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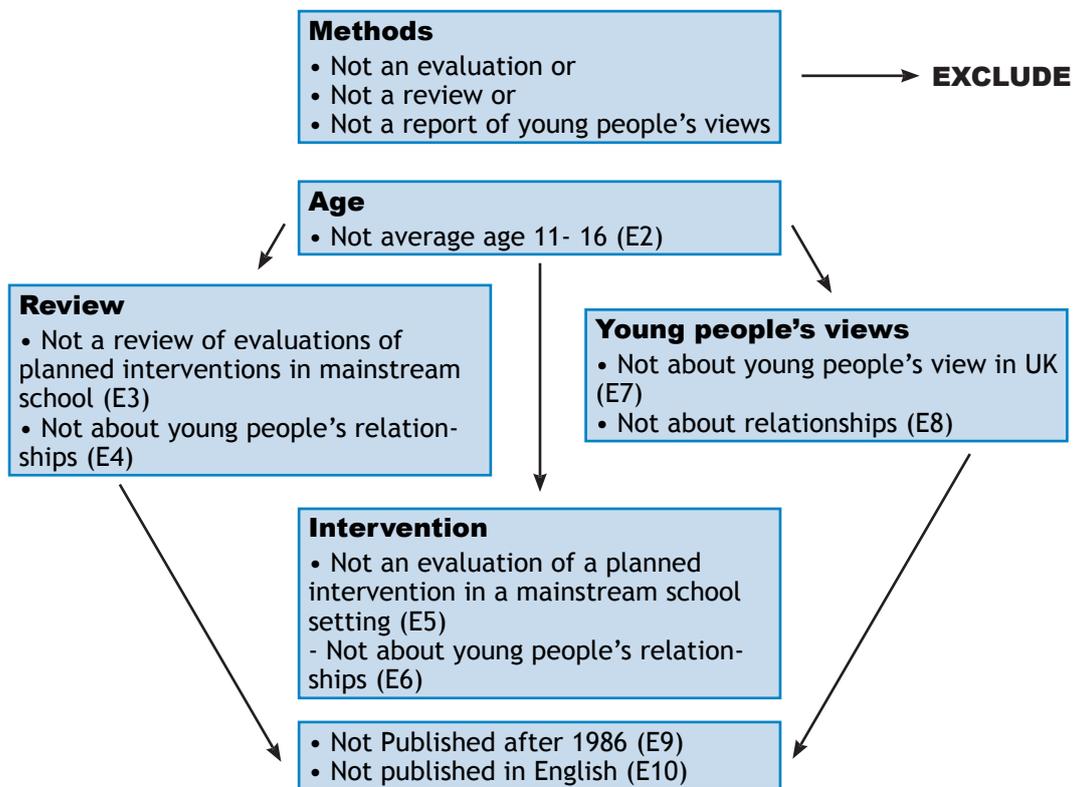
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## Appendix 2.1: Exclusion criteria

This appendix shows the original exclusion criteria for the map and the diagram that was used to apply them. At the time the searches were done, the Review Group intended to include in the map studies of the views of young people about relationships. There was not time to do this and so these studies were not keyworded or included in the map.

### **Exclusion criteria**

1. Not an evaluation or not a review or not a report of young people's views
2. Not average age 11-16
3. Not a review of evaluations of planned interventions in mainstream school
4. Not a review about young people's relationships
5. Not an evaluation of a planned intervention in a mainstream school setting
6. Not an evaluation about young people's relationships
7. Not about young people's view in UK
8. Not about young people views on relationships
9. Not published after 1986
10. Not published in English



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## Appendix 2.2: Search strategy for electronic databases

### **CONTROLLED SEARCH TERMS**

ERIC 1986-2004

Cambridge Scientific Abstracts

Searched: 19 February 2004

#1 KW=((health education) or (family life education) or (values education))

#2 KW=(leisure education) or (alcohol education) or (drug education)

#3 KW= (citizenship) or (smoking) or (substance abuse) or (wellness))

#4: #1 OR #2 OR #3

#5 KW=((self esteem) or (adolescent behaviour) or (interpersonal competence))

#6 KW=(teacher student relationship) or (peer relationship) or (parent student relationship)

#7KW = (intimacy) or (interpersonal relationship) or (individual development) #8 KW= (social behaviour))

#9: #5 OR #6 OR #7 OR #8

#10 KW=((high school students) or adolescents or (early adolescents))

#11KW= (secondary school students) or (secondary education))

### **Sociological Abstracts 1986-2003**

Cambridge Scientific Abstracts

Searched: 26 February 2004

#1 de=(adolescents)

#2 de= ((high school students)

#3 de= ((junior high school students)))

#4: #1 OR #2 OR #3

#5 de=(self actualization)

#6 de=((parent child relations)

#7 de= (family relations))

#8 de=((dating social)

#9 de= friendship

#10 de= (homosexual

#11 de= (relationships)

#12 de=(opposite sex relations)

#13 de=(peer relations)

#14 de=(student teacher relationship)

#15 de=(empathy)

#16 de=(interpersonal conflict)

#17 de = (interpersonal relationship satisfaction)

#18 de = (intimacy)

#19 de=(self esteem)

#20 de=trust)

#21de=(interpersonal relations)

#22de=(adolescent development))

23: #5 OR #6 OR #7 OR #8 OR 9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19  
 OR #20 OR #21 OR #22  
 #24 KW=(education)  
 #25 KW =(health education)  
 #26 KW = (sex education)  
 #27 KW= (marriage )  
 #28: #24 OR 25 OR #26 OR #27  
 #29 KW = (family education))  
 #30 KW= (moral education)  
 #31 KW = (smoking)  
 #32 KW=(drug abuse)  
 #33 KW =(educational programs)  
 #34 KW = (wellbeing)

### **ASSIA (1986-2004)**

Cambridge Scientific Abstracts

Searched: 12 February 2004

KW = peer and relationships or peer and acceptance or peer and attachment or peer and groups or peer and pressure or peer and rejection or friends or friendships or emotional and development or psychosocial & development or socioemotional & development or parent adolescent and communication or parent-adolescent and interactions or parent-adolescent and relationships or teacher-student and relationships or teacher-student & interactions or antisocial and behaviour civility or courtesy or esteem or emotional and wellbeing or feelings or affective and experiences or prosocial & behaviour or respect or sense and of and self or sexual and behaviour or interpersonal and relationships and KW=health education or drug education or sexual health education or KW=parenthood education or wellbeing and comprehensive schools or high schools or junior high schools or junior secondary schools or secondary schools or KW=secondary education or de=adolescents or young people

### **BEI**

OVID

Searched: 11 March 2004

Headings=("EVALUATION") OR ("LITERATURE REVIEWS") OR (INTERVENTION PROGRAMMES") OR ("INTERVENTION") AND ("YOUNG PERSONS") OR ("ADOLESCENTS") OR ("YOUTH") OR ("SECONDARY") AND 15 term(s): Year of Publication=1989" OR "1990" OR "1991" OR "1992" OR "1993" OR "... OR "1986" OR "1987" OR "1988")

Search: 2 term(s): BEI Subject Headings=("BEHAVIOUR CHANGE") OR ("PERSONAL DEVELOPMENT") OR ("SOCIAL BEHAVIOUR") OR SELF ESTEEM") OR ("INTERPERSONAL RELATIONSHIP") OR "INTERPERSONAL RELA..." OR ("RELATIONSHIPS") AND 15 term(s): Year of Publication=("1989" OR "1990" OR "1991" OR "1992" OR "1993" OR "... OR ("1986" OR "1987" OR "1988") AND 1 term(s): BEI Subject Headings=("YOUNG PERSONS") OR BEI ("ADOLESCENTS") OR ("YOUTH") OR SECONDARY") AND 15 term(s): Year of Publication=("1989" OR "1990" OR "1991" OR "1992" OR "1993" OR "... OR ("1986" OR "1987" OR "1988")

DARE

Searched: 18 March 2004

"Child" OR "adolescent" in exploded subject headings AND

(school OR pupil OR classroom OR education OR teacher) in title

### **PubMed**

OVID

Searched: 17 March 2004

- #1 Search (counsel\* OR mediat\* OR relationships OR peer\* OR friend\* OR emotion\* OR wellbeing OR well-being OR problem-solving OR competen\* OR intima\* OR parent\* OR communit\* OR ethos OR self-esteem OR self-worth OR prevent\* OR confiden\* OR feel\* OR budd\* OR respect OR tutor\* OR trust\* OR caring OR positive OR development OR inclu\* OR pastoral OR cooperative OR pro-social OR prosocial OR empath\* OR social-skills OR circle-time OR PSHE OR SRE OR PSE) Field: Title/Abstract, Limits: Adolescent: 13-18 years, Publication Date from 1986, English, Human
- #2 Search (school\* OR pupil\* OR classroom OR education\* OR teacher\*) Field: Title, Limits: Adolescent: 13-18 years, Publication Date from 1986, English, Human
- #3 Search (outcome\* OR evaluat\* OR program\* OR intervention\* OR effectiv\* OR evidence OR trial OR randomis\* OR randomiz\* OR policy OR policies) Field: Title, Limits: Adolescent: 13-18 years, Publication Date from 1986, English, Human
- #4 Search #1 AND #2 AND #3 Limits: Adolescent: 13-18 years, Publication Date from 1986, English, Human

**SSCI (1986-2004)**

Cambridge Scientific Abstracts

Searched: 19 February 2004

((((( Parent School Relations )or( Social Support Networks )) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) or ((( Family Relations )or( Interpersonal Interaction )or( Peer relations )) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004))) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) and ((((((( Secondary Education ) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) or ((( Private School Education )or( Public School Education )or( Religious Education )) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) or ((( Program Development )or( Elementary School )or( Middle School Education )) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004))) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) or ((( Family Life Education )or( Health Education )or( Curriculum )) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004))) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) or ((( Family Life Education )or( Health Education )or( Curriculum )) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004))) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) and ((( School Age ) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) or ((( Young adulthood )or( Adolescence )or( Childhood )) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004))) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004)) and (LA:PY = ENGLISH) and (PY:PY = 1986-2004))

**FREE TEXT SEARCH TERMS**

ERIC / Sociological Abstracts / BEI / PubMed / HealthPromis

**SEARCH FOR INTERVENTION STUDIES (including problems)**

((school\* OR pupil\* OR classroom OR education\* OR teacher\*) AND (counsel\* OR mediat\* OR relationships OR peer\* OR friend\* OR emotion\* OR wellbeing OR well-being OR problem-solving OR competen\* OR intima\* OR parent\* OR communit\* OR ethos OR self-esteem OR self-worth OR prevent\* OR confiden\* OR feel\* OR budd\* OR respect OR tutor\* OR trust\* OR caring OR positive OR development OR inclu\* OR pastoral OR cooperative OR pro-social OR prosocial OR empath\* OR social-skills OR circle-time OR PSHE OR SRE OR PSE OR (bully\* OR bullie\* OR victim\* OR bereav\* OR aggressi\* OR violen\* OR conflict\* OR racis\* OR excluded OR exclusion OR lonel\* OR isolat\* OR marginal\* OR stress OR self-harm\* OR worr\* OR distress OR cris\*s OR arguments OR truan\* OR disrespect\*)) AND (outcome\* OR evaluat\* OR program\* OR intervention\* OR effectiv\* OR evidence OR trial OR randomis\* OR randomiz\* OR policy OR policies)

**SEARCH FOR INTERVENTION STUDIES (excluding problems)**

((school\* OR pupil\* OR classroom OR education\* OR teacher\*) AND (counsel\* OR mediat\* OR relationships OR peer\* OR friend\* OR emotion\* OR wellbeing OR well-being OR problem-solving OR competen\* OR intima\* OR parent\* OR communit\* OR ethos OR self-esteem OR self-worth OR prevent\* OR confiden\* OR feel\* OR budd\* OR respect OR tutor\* OR trust\* OR caring OR positive OR development OR inclu\* OR pastoral OR cooperative OR pro-social OR prosocial OR empath\* OR social-skills OR circle-time OR PSHE OR SRE OR PSE)) AND (outcome\* OR evaluat\* OR program\* OR intervention\* OR effectiv\* OR evidence OR trial OR randomis\* OR randomiz\* OR policy OR policies)

***MODIFIED FREE TEXT SEARCH TERMS***

PsychInfo

***INTERVENTION STUDIES***

pupil\* OR classroom OR teacher\* AND mediat\* OR peer\* OR friend\* OR emotion\* OR wellbeing OR well-being OR problem-solving OR competen\* OR intima\* OR parent\* OR communit\* OR self-esteem OR self-worth OR prevent\* OR confiden\*OR feel\* OR budd\* OR respect OR tutor\* OR trust\* OR caring OR positive OR inclu\* OR pastoral OR prosocial OR empath\* OR social-skills OR bully\* OR conflict\* OR lonel\* OR isolat\* OR circle-time OR PSHE OR SRE OR PSE AND outcome\* OR evaluat\* OR program\* OR intervention\* OR policy

## APPENDIX 2.3 EPPI-Centre keyword sheet, including review-specific keywords

### V0.9.7 Bibliographic details and/or unique identifier

#### A1. Identification of report

Citation .....  
 Contact .....  
 Handsearch .....  
 Unknown .....  
 Electronic database (please specify) .....

#### A2. Status

Published .....  
 In press .....  
 Unpublished .....

#### A3. Linked reports

*Is this report linked to one or more other reports in such a way that they also report the same study?*

Not linked .....  
 Linked (please provide bibliographical details and/or unique identifier) .....

#### A4. Language (please specify)

#### A5. In which country/countries was the study carried out? (please specify)

#### A6. What is/are the topic focus/foci of the study?

Assessment .....  
 Classroom management .....  
 Curriculum\* .....  
 Equal opportunities .....  
 Methodology .....  
 Organisation and management .....  
 Policy .....  
 Teacher careers .....  
 Teaching and learning .....  
 Other (please specify) .....

#### A7. Curriculum

Art .....  
 Business studies .....  
 Citizenship .....  
 Cross-curricular .....  
 Design and technology .....  
 Environment .....  
 General .....  
 Geography .....  
 Hidden .....  
 History .....  
 ICT .....  
 Literacy - first language .....  
 Literacy further languages .....  
 Literature .....  
 Mathematics .....  
 Music .....  
 PSE .....  
 Physical education .....  
 Religious education .....  
 Science .....  
 Vocational .....  
 Other (please specify) .....

#### A8. Programme name (please specify)

#### A9. What is/are the population focus/foci of the study?

Learners .....  
 Senior management .....  
 Teaching staff .....  
 Non-teaching staff .....  
 Other education practitioners .....  
 Government .....  
 Local education authority officers .....  
 Parents .....  
 Governors .....  
 Other (please specify) .....

#### A10. Age of learners (years)

0-4 .....  
 5-10 .....  
 11-16 .....  
 17-20 .....  
 21 and over .....

#### A11. Sex of learners

Female only .....  
 Male only .....  
 Mixed sex .....

#### A12. What is/are the educational setting(s) of the study?

Community centre .....  
 Correctional institution .....  
 Government department .....  
 Higher education institution .....  
 Home .....  
 Independent school .....  
 Local education authority .....  
 Nursery school .....  
 Post-compulsory education institution .....  
 Primary school .....  
 Pupil referral unit .....  
 Residential school .....  
 Secondary school .....  
 Special needs school .....  
 Workplace .....  
 Other educational setting (please specify) .....

#### A13. Which type(s) of study does this report describe?

A. Description .....  
 B. Exploration of relationships .....  
 C. Evaluation .....  
   a. naturally-occurring .....  
   b. researcher-manipulated .....  
 D. Development of methodology .....  
 E. Review .....  
   a. Systematic review .....  
   b. Other review .....

## **Review-specific questions**

### ***Section A: All study types***

#### **A.1 Type of study**

A.1.1 Intervention

A.1.2 Views

A.2 Relationship focus/foci

#### **A.2.1 General**

A.2.2 Parents/family

A.2.3 Student/teacher

A.2.4 Friends/peers

A.2.5 Sex/girl/boyfriend

A.2.6 Other

### ***Section B: Intervention studies***

#### **B.1 Intervention type (please write in additional details)**

B.1.1 Health, including drugs, smoking etc.

B.1.2 Social / emotional wellbeing

B.1.3 Behaviour

B.1.4 Educational

B.1.5 Democracy, citizenship etc.

B.1.6 Other

#### **B.2 Intervention: level at which applied**

B.2.1 Wider than school

B.2.2 Whole-school

B.2.3 Classroom

B.2.4 Small group

B.2.5 One-to-one

B.2.6 Other (specify)

#### **B.3 Intervention: delivered by**

B.3.1 Peers

B.3.2 Teachers/school staff: tutor

B.3.3 Teachers/school staff: subject teachers

B.3.4 Teachers/school staff: pastoral/head of year

B.3.5 Teachers/school staff: other staff - e.g. school nurse, school counsellor

B.3.6 Outside agencies

B.3.7 Other (specify)

#### **B.4 Intervention: delivered through**

B.4.1 ICT

B.4.2 Video/film etc.

B.4.3 Games

B.4.4 Lecture

B.4.5 Activities

B.4.6 Discussion / argument

B.4.7 Books / leaflets / written

B.4.8 Drama

B.4.9 Other (specify)

#### **B.5 What relationship outcomes?**

B.5.1 Details (free-text to begin with)

#### **B.6 How are relationships outcomes assessed?**

B.6.1 Details

#### **B.7 What is/are the main outcome focus/foci of the study?**

B.7.1 Details

---

## Appendix 2.4: Research carried out by students

Students carried out their own research about relationships in the school. This included questionnaires and focus groups which were designed and carried out by the year 10 students. The questionnaire below asked about PSHE lessons, friendships, views about family and about girlfriend/boyfriend issues. It was distributed to years 8 and 9. Around 350 students completed the questionnaires which were anonymous. Their replies to closed and open questions were analysed and used by the team to help with clarifying the review topic.

The focus groups asked small groups of pupils from years 8, 9 and 10 to talk about relationships. The year 10 students made videos of the discussions.

Fuller details of the findings are available from the research team.

### Personal Citizenship and Health Education Questionnaire

In an attempt to improve PCHE we want to find out your views. Please fill in this short questionnaire which has been devised by a group of Year 10 students. It should take no longer than 10 minutes. We do not want you to put your name on it - it is anonymous. You do not have to fill it in - it is voluntary. You can ask for help with it if you want. The results will be put together with other research to make suggestions for improvement. Please start by telling us which year group you are in.

Year 8

Year 9

#### A Teacher-student relationships

1 What would you like to include in your PCHE lessons to make them more enjoyable? (tick all that you agree with)

- |              |                          |                   |                          |
|--------------|--------------------------|-------------------|--------------------------|
| Written work | <input type="checkbox"/> | Visiting speakers | <input type="checkbox"/> |
| Practicals   | <input type="checkbox"/> | Group work        | <input type="checkbox"/> |
| Discussions  | <input type="checkbox"/> | Drama             | <input type="checkbox"/> |
| Music        | <input type="checkbox"/> | Art               | <input type="checkbox"/> |
| ICT          | <input type="checkbox"/> |                   |                          |
- Other (please say what).....

2 Have schools influenced the way you feel about relationships?

Yes

No

3 What would make you take PCHE more seriously? (tick all that you agree with)

- |                             |                          |                |                          |
|-----------------------------|--------------------------|----------------|--------------------------|
| Levels                      | <input type="checkbox"/> | Graded         | <input type="checkbox"/> |
| Different topics            | <input type="checkbox"/> | Longer session | <input type="checkbox"/> |
| Work marked                 | <input type="checkbox"/> |                |                          |
| More knowledgeable teachers | <input type="checkbox"/> |                |                          |
| More confident teachers     | <input type="checkbox"/> |                |                          |
| GCSE Exam in PCHE           | <input type="checkbox"/> |                |                          |
| Other assessment (not exam) | <input type="checkbox"/> |                |                          |
| Certificates                | <input type="checkbox"/> | Rewards        | <input type="checkbox"/> |

4 In PCHE what do you want to be taught about relationships?

#### B Friendship

1 Are there things in school which get in the way of friendships?

Yes

No

2 Has being open with your friends affected your relationship with them?

Yes  No

Please explain why

.....  
.....

3 Does homework affect your friendships?

Yes  No

4 Do friends influence the way you think about relationships?

Yes  No

**C Family**

1 Do you feel hitting children is right?

Yes  No

2 Do issues in your home life affect your school work?

Yes  No

3 Do issues in your home life affect your relationships with friends?

Yes  No

4 How would you approach a family problem or issue?

**D Boy/girlfriend**

1 Do you think you are ready for a boyfriend /girlfriend?

Yes  No

2 Why do people want a boyfriend/girlfriend while at school?

3 Do you feel we should discuss homosexuality more seriously at school?

Yes  No

4 Do you feel pressured to get into boyfriend/girlfriend relationships?

Yes  No

## Appendix 4.1: Comparison of studies in systematic map and in-depth review

<b>Identification of the study</b> ( <i>Not mutually exclusive</i> )	Number in systematic map (N = 75)	Number in in-depth review (N = 10)
Citation	12	5
Handsearch	12	1
Electronic database	52	4

<b>Country</b> ( <i>Not mutually exclusive</i> )	Number in systematic map (N = 75)	Number in in-depth review (N = 10)
USA	47	7
UK	11	0
Canada	6	2
European	6	0
Australia and NZ	3	1
Africa	2	0
Central & South America	2	0
Asia	0	0
Other	1	0

<b>Study types</b> ( <i>Not mutually exclusive</i> )	Number in systematic map (N = 75)	Number in in-depth review (N = 10)
Researcher-manipulated	59	9
<i>RCT</i>	18	3
<i>Other</i>	33	6
Naturally occurring	16	1

<b>Types of learners</b>	Number in systematic map (N = 75)	Number in in-depth review (N = 10)
<b>Educational setting (N = 75)*</b>		
Primary school	5	0
Secondary school	75	10
Residential school	1	0
Special needs school	0	0
Independent school	0	0
Other	2	0
<b>Age of learners (N = 75)*</b>		
5-10	6	0
11-16	74	10
17-20	10	0
<b>Sex of learners**</b>		
Mixed sex	72	10
Male only	2	0
Female only	1	0
Not stated	0	0
<b>Total</b>	<b>75</b>	<b>10</b>

\* Not mutually exclusive

\*\* Mutually exclusive

## Review-specific keywords

<b>Intervention type</b> (Not mutually exclusive)	Number in systematic map (N = 75)	Number in in-depth review (N = 10)
Health - including drugs, sex, etc.	24	1
Social or emotional wellbeing	38	5
Behaviour - including bullying, violence	42	8
Educational	15	2
Democracy, citizenship, etc.	7	1
Other	5	0

<b>Level at which intervention applied</b> (Not mutually exclusive)	Number in systematic map (N = 75)	Number in in-depth review (N = 10)
Wider than the school	10	0
Whole school	18	2
Classroom	47	8
Small group	23	1
One-to-one	11	0
Other	8	1

<b>Intervention delivered by</b> (Not mutually exclusive)	Number in systematic map (N = 75)	Number in in-depth review (N = 10)
Peers	20	1
Teachers/school staff: tutor	20	1
Teachers/school staff: subject teachers	33	6
Teachers/school staff: pastoral/head of year	10	1
Teachers/school staff: other staff e.g. school nurse, school counsellor	17	1
Outside agencies	17	1
Other	13	4

<b>Intervention delivered through</b> <i>(Not mutually exclusive)</i>	<b>Number in systematic map</b> <b>(N = 75)</b>	<b>Number in in-depth review</b> <b>(N = 10)</b>
Discussion/argument	40	4
Activities	35	5
Drama	19	3
Books/leaflets/other written	17	4
Lecture	14	3
Video/film	13	1
Games	4	0
ICT	1	1
Other	35	4

<b>Relationship focus</b> <i>(Not mutually exclusive)</i>	<b>Number in systematic map</b> <b>(N = 75)</b>	<b>Number in in-depth review</b> <b>(N = 10)</b>
Friends/peers	42	7
Teacher-student	26	3
General	24	5
Parents/family	21	2
Girlfriend/boyfriend	7	0
Other	7	0

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## Appendix 4.2: Details of studies in the in-depth review

### **Bosworth K, Espelage D, DuBay T, Daytner G, Karageorge K (2000) Preliminary evaluation of a multimedia violence prevention program for adolescents**

#### **Country of study**

USA

#### **Age of learners**

11-14

#### **Type of study**

Researcher-manipulated evaluation: controlled trial

#### **Aims of the study**

This aim of this study was to evaluate the impact of a computer-based intervention (SMART Talk) which contains a number of theoretically driven anger-management and conflict resolution modules.

Description of the intervention SMART Talk Multi Media Violence Prevention Program for Adolescents  
The three modules include:

##### (1) Anger management

What's anger? Uses animation, interactive assessment interviews and goes to teach students to learn/ recognise their cycle of anger  
Triggers and fuses students identify, through an interactive interview, the situations and events that are likely to trigger their anger.

Anger busters seven ways to de-escalate anger are described

Channel surfing - Anger management skills are practiced using a game format

(2) Dispute resolution. The dispute resolution module, Talking It Out, uses the interactive interview capabilities of the computer to walk two adolescents through a real problem-solving process. After reaching consensus on a solution, a contract for each adolescent is printed.

(3) Perspective taking. In the perspective-taking module, Celebrity Interviews, four celebrities (a recording artist, a football player, a comic book artist, and a columnist for a popular teen magazine) describe how they resolve conflict and manage stress in interpersonal relationships. Students have the opportunity to hear their responses to questions about how they handle anger and conflict.

One or two students can go through the modules sequentially or use them as stand-alone modules at any time

#### **Summary of study - design and sample**

The study comprised a cluster-randomised trial with nine clusters, six of which were assigned to the intervention group and three to the control group.

Each school grade comprised three 'teams' of 100 to 140 students. Students had been randomly assigned to their teams at the beginning of the school year. For evaluation purposes, two teams in each grade were randomly assigned to the intervention group and one to the control group.

Participants were 6th (42%), 7th (31%) and 8th (27%) graders. 54% (N=300) were girls; 46% were boys (N=258).

#### **Data-collection tools/validity and reliability**

Self-completion questionnaires were individually completed when read out to participants at a large school assembly.

Self-report measures on neighbourhood safety, accessibility of guns and measures of anger, impulsivity, depression, fighting, bullying, caring/co-operative behaviour, violent conflict resolution skills were collected alongside demographic data and information from archival records of grades and school disciplinary actions.

Participants were asked to evaluate the computer programme

**Reliability and validity**

The self-reported questionnaires were based on three existing instruments: the Indiana University Teen Conflict Scale, the University of Texas scale for depression and the University of Texas scale for aggression were used to provide robustness.

Study measures were developed specifically for this evaluation, and items were generated that related clearly to the construct of interest. An exploratory factor analysis was conducted for all study measures and these measures were further evaluated in a pilot investigation of the SMART Talk programme to ensure further validity.

**Methods, reliability and validity of analysis**

Preliminary analyses were conducted to determine baseline equivalency between the participants in the intervention and control groups. This was followed by descriptive analyses of several important survey questions and data obtainable from the use of SMART Talk.

A repeated measures MANCOVA was calculated to evaluate the impact of the intervention on study variables between pre- and post-testing. Additional multivariate analyses evaluated whether the impact of the intervention varied as a function of participants' grade level or gender.

**Reliability and validity**

Authors do not go into details about the reliability or validity of their data analysis. However, the use of a MANCOVA may have addressed this issue.

**Summary of results**

Use of the intervention computer programme: On average, students in the intervention group reported 8.4 uses of the components with high levels of interaction and 4.5 uses of those with lower levels of interaction.

Impact of the intervention: The intervention is reported as having an impact on students' beliefs supportive of violence and intention to use non-violent strategies but not on reported aggression.

The authors report no differences by gender, eligibility from free meals or ethnicity

**Conclusions**

The authors conclude: 'Although these results do not show a significant change in aggressive behaviour, the finding of small but significant changes in self-awareness, attitudes and intentions to use non-violent strategies in conflict situations indicates a positive effect on critical mediating variables.'

Weight of evidence A: Medium trustworthiness

Weight of evidence B: High

Weight of evidence C: Medium

Weight of evidence D: Medium

**DuRant HR, Barkin S, Krowchuk MD (2001) Evaluation of a peaceful conflict resolution and violence prevention curriculum for sixth-grade students****Country of study**

USA

**Age of learners**

11-14

**Type of study**

Researcher-manipulated evaluation: controlled trial

**Aims of the study**

The broad aims of the study was to evaluate a Social Cognitive Theory-based violence prevention curriculum among sixth-grade students.

**Description of the intervention**

The Peaceful Conflict Resolution and Violence Prevention curriculum included 13 modules:

1. Introduction to violence
2. The conflict cycle
3. Avoidance, confrontation and problem-solving
4. Communication and its impact of violence
5. Angry words
6. Dealing with peer pressure
7. Conflict resolution step-by-step
8. Planning for problem-solving
9. Setting the tone
10. Finding a good resolution
11. Practising conflict resolution (multiple role-plays)
12. Expressing anger without fighting
13. What happens before, during and after a fight

Each module is designed to be used in a classroom setting and lasts approximately 50 minutes. The curriculum includes the use of handouts, written exercises and role-plays for each of the different modules.

**Summary of study design and sample**

This was a quasi-experimental pre-test/post-test control group design. Students in all schools completed pre- and post-test questionnaires. Two intervention schools received the Peaceful Conflict Resolution and Violence Prevention Curriculum during 13 health education lessons; two control schools did not.

There were 704 participants at the pre-test (292 intervention, 412 control), resulting in 563 completed usable questionnaires at both points in time (233 intervention, 330 control).

It was a mixed sex sample: 48.9% of the population was male; 51.1% were female.

**Data-collection tools/validity and reliability**

This study used self-completion questionnaires which included a 'Violence in Hypothetical Situations' scale; a five-item scale assessing use of violence in the previous 30 days; and scales meas-

uring victimisation and violence during the previous three months and during the student's life.

The questionnaire used in this study was chosen because it has been used in previous studies led by the first author and had previously been tested and analysed for its internal reliability.

#### **Methods, reliability and validity of analysis**

Statistical measures were used to test the differences between groups in categorical variables, variables measured on ranked scales, and continuous level variables.

Initially, models were constructed that assessed time, group and group x time interaction effects. Next, gender was added to the models as a main effect, and exposure to violence and victimisation and depression were added as covariates to determine whether they influenced the group x time interaction effects.

Chi-square for categorical variables, Kruskal-Wallis for ranked variables, general linear modelling with repeated measures for continuous variables were administered.

Both one-way ANOVA and general linear modelling were used to compare intervention and control groups on exposure to violence.

#### **Reliability and validity**

Authors do not go into details about the reliability or validity of their data analysis. However, the use of standardised statistical measures (a one-way ANOVA and general linear modelling) may have addressed these issues.

#### **Summary of results**

The results suggest a slight positive short-term effect of the Peaceful Conflict and Violence Prevention Curriculum on self-reported use of violence and intention to use violence. From pre-test to post-test, there was a slight decrease in the use of violence by students in the intervention group and an increase in the use of violence by students in the control group.

Most of the changes were accounted for by changes in the frequencies of carrying concealed guns and fighting, resulting in injuries requiring medical treatment. Students in the intervention group did not increase their intention to use violence from pre-test to post-test, whereas students in the control group increased their score on this measure.

#### **Conclusions**

In general, the Peaceful Conflict Resolution and Violence Prevention Curriculum appears to have positive short-term effects (over a three-month period) on self-reported use of violence and intentions to use violence by these middle-school students. This study, combined with findings from previous studies, provides support for the integration of violence prevention and conflict resolution curricula into health education curricula during early adolescence. The authors also conclude that school-based programmes can become an effective

component when part of a comprehensive, community-wide violence prevention effort.

Weight of evidence A: Medium trustworthiness. There seems to be some positive and reasonably reliable evidence of the effects of the intervention, but this must be balanced against the acknowledged limitations of the quasi-experimental design

Weight of evidence B: Medium. Since this is a pilot evaluation, the quasi-experimental design is acceptable, but the lack of randomization and the specific characteristics of the sample suggest that it is not closely applicable to our specific review question

Weight of evidence C: Medium

Weight of evidence D: Medium

### **DuRant HR, Barkin S, Krowchuk MD (2001) Evaluation of a peaceful conflict resolution and violence prevention curriculum for sixth-grade students**

#### **Country of study**

USA

#### **Age of learners**

11-14

#### **Type of study**

Researcher-manipulated evaluation: controlled trial

#### **Aims of the study**

The broad aims of the study was to evaluate a Social Cognitive Theory-based violence prevention curriculum among sixth-grade students.

#### **Description of the intervention**

The Peaceful Conflict Resolution and Violence Prevention curriculum included 13 modules:

1. Introduction to violence
2. The conflict cycle
3. Avoidance, confrontation and problem-solving
4. Communication and its impact of violence
5. Angry words
6. Dealing with peer pressure
7. Conflict resolution step-by-step
8. Planning for problem-solving
9. Setting the tone
10. Finding a good resolution
11. Practising conflict resolution (multiple role-plays)
12. Expressing anger without fighting
13. What happens before, during and after a fight

Each module is designed to be used in a classroom setting and lasts approximately 50 minutes. The curriculum includes the use of handouts, written exercises and role-plays for each of the different modules.

**Summary of study design and sample**

This was a quasi-experimental pre-test/post-test control group design. Students in all schools completed pre- and post-test questionnaires. Two intervention schools received the Peaceful Conflict Resolution and Violence Prevention Curriculum during 13 health education lessons; two control schools did not.

There were 704 participants at the pre-test (292 intervention, 412 control), resulting in 563 completed usable questionnaires at both points in time (233 intervention, 330 control).

It was a mixed sex sample: 48.9% of the population was male; 51.1% were female.

**Data-collection tools/validity and reliability**

This study used self-completion questionnaires which included a 'Violence in Hypothetical Situations' scale; a five-item scale assessing use of violence in the previous 30 days; and scales measuring victimisation and violence during the previous three months and during the student's life.

**Validity and reliability**

The questionnaire used in this study was chosen because it has been used in previous studies led by the first author and had previously been tested and analysed for its internal reliability.

**Methods, reliability and validity of analysis**

Statistical measures were used to test the differences between groups in categorical variables, variables measured on ranked scales, and continuous level variables.

Initially, models were constructed that assessed time, group and group x time interaction effects. Next, gender was added to the models as a main effect, and exposure to violence and victimisation and depression were added as covariates to determine whether they influenced the group x time interaction effects.

Chi-square for categorical variables, Kruskal-Wallis for ranked variables, general linear modelling with repeated measures for continuous variables were administered.

Both one-way ANOVA and general linear modelling were used to compare intervention and control groups on exposure to violence.

**Reliability and validity**

Authors do not go into details about the reliability or validity of their data analysis. However, the use of standardised statistical measures (a one-way ANOVA and general linear modelling) may have addressed these issues.

**Summary of results**

The results suggest a slight positive short-term effect of the Peaceful Conflict and Violence Prevention Curriculum on self-reported use of violence and intention to use violence. From pre-test to post-test, there was a slight decrease in the use of violence by students in the intervention group and an increase in the use of violence by students in the control group.

Most of the changes were accounted for by changes in the frequencies of carrying concealed guns and fighting, resulting in injuries requiring medical treatment. Students in the intervention group did not increase their intention to use violence from pre-test to post-test, whereas students in the control group increased their score on this measure.

**Conclusions**

In general, the Peaceful Conflict Resolution and Violence Prevention Curriculum appears to have positive short-term effects (over a three-month period) on self-reported use of violence and intentions to use violence by these middle-school students. This study, combined with findings from previous studies, provides support for the integration of violence prevention and conflict resolution curricula into health education curricula during early adolescence. The authors also conclude that school-based programmes can become an effective component when part of a comprehensive, community-wide violence prevention effort.

Weight of evidence A: Medium trustworthiness

There seems to be some positive and reasonably reliable evidence of the effects of the intervention, but this must be balanced against the acknowledged limitations of the quasi-experimental design

Weight of evidence B: Medium

Since this is a pilot evaluation, the quasi-experimental design is acceptable, but the lack of randomization and the specific characteristics of the sample suggest that it is not closely applicable to our specific review question

Weight of evidence C: Medium

Weight of evidence D: Medium

## Farrell AD, Meyer AL, White KS (2001) Evaluation of responding in peaceful and positive ways (RIPP): a school-based prevention program for reducing violence among urban adolescents

**Country of study**

USA

**Age of learners**

11-16

**Type of study**

Researcher-manipulated evaluation: controlled trial

**Aims of the study**

The aim of this study was to evaluate the impact of the sixth-grade RIPP curriculum on knowledge, attitudes and behaviour targeted by the intervention.

**Description of the intervention**

Responding in peaceful and positive ways (RIPP): A violence prevention curriculum The curriculum components include:

1. Teaching about violence

2. Techniques of how to dealing with conflict situations: for example, peer mediation and personal strategies, such as SCIDDLE (Stop, Calm down, Identify problems/feelings, Decide on your options, Do it, Look back, Evaluate).

The RIPP curriculum was implemented in the context of a school wide peer mediation programme supervised by a prevention specialist. The curriculum comprised of 25 lessons in total.

### Summary of study design and sample

This study was a cluster randomised trial with classes as the unit of allocation. Follow-up data was obtained six and twelve months after completion of the programme by readministering the same measures.

27 sixth-grade classes in the three schools were randomly assigned to intervention (N=13) and control (N=14).

There were 314 boys and 312 girls (N= 626) in the study.

### Data collection tools/validity and reliability

The data was collected in the classroom, using self-report measures. These included reports of violent behaviour, drug use, knowledge of the intervention materials, attitudes related to violence and endorsement of non-violent methods for dealing with problems.

### Reliability and validity

For some of the measures, the authors refer to published papers about that measure, and for others they cite reliability data and efforts to check validity.

### Methods, reliability and validity of analysis

Comparisons were made of reports of disciplinary incidents, attendance and grade point averages and self-reported measures of attitudes to violence, involvement in violent behaviour and use of non-violent methods for solving disputes.

Comparisons between intervention and control groups were on an intention to treat basis. No raw outcome data was reported; therefore findings are presented as adjusted.

The authors used a generalised estimating equation (GEE) approach in order to take account of the fact that the study was cluster randomised.

### Reliability and validity

Authors do not go into details about the reliability or validity of their data analysis. However, the use of standardised statistical measures (GEE) may have addressed these issues as the authors argue that this has taken account of the inter-cluster correlations.

### Summary of results

The authors report intervention effects on the Responding in Positive and Peaceful Ways (RIPP) knowledge test but not on measures of attitudes or the use of non-violent strategies for addressing hypothetical situations. Although the differences in

knowledge and views were not significant, intervention students were less likely to report that they had been injured in a fight and more likely to report involvement in peer mediation.

Overall, intervention participants had fewer disciplinary violations for violent offences and in-school suspensions at post-test compared with the control group.

However, there was some evidence that the intervention had a greater impact on students who reported a higher level of violent behaviour at the start of the project compared with the self-reported frequency of violence among students who reported low pre-test levels. These effects were evident at both the six-month and 12-month follow-up assessment; the reduction in suspensions was maintained at 12-month follow-up, but only for boys, not for girls.

### Conclusions

The authors conclude that the programme did have an impact on disciplinary violations, suspensions, reported injuries and reported violence. However, the programme's impact on reported violent behaviour was more evident for those with high pre-test levels of problem behaviour. There was no clear impact on 'mediating variables', such as attitudes, but the intervention group did have better knowledge about problem-solving strategies.

Weight of evidence A: High

Weight of evidence B: High

Weight of evidence C: Medium

Weight of evidence D: Medium

## Johnson DW, Johnson R, Dudley B, Mitchell J, Fredrickson J (1997) The impact of conflict resolution training on middle school students

### Country of Study

USA

### Age of learners

11-15

### Type of study

Researcher-manipulated evaluation: cluster allocated randomised controlled trial

### Aims of the study

The aim of the study was to investigate two questions:

(a) Do middle school students actually learn the conflict resolution procedures taught?

(b) Can they apply the procedures to actual conflict situations?

### Description of the intervention

Conflict-resolution training programme

The training program combined:

(a) Integrative negotiation: Teaches students to find mutually satisfying solution to problems

(b) Perspective reversal procedures: Focuses students on viewing conflict from both points of view

The negotiation procedure consisted of six steps: (1) describing what you want, (2) describing how you feel, (3) explaining the reasons underlying your wants and feelings, (4) reversing perspectives, (5) inventing at least three optional agreements for mutual gain, and (6) reaching an integrative agreement.

The mediation procedure consisted of four steps: (1) ending hostilities, (2) ensuring commitment to mediation, (3) facilitating negotiations, and (4) formalizing the agreement.

Co-operative learning procedure, including procedural learning, role-playing, drill and review exercises, and small-group discussions were used to teach (a) the nature of conflict, (b) how to engage in integrative negotiations, and (c) how to mediate schoolmates' conflicts.

The training was taught in 25-minute homeroom for approximately 34 weeks.

### **Summary of study design and sample**

A pre-test/post-test control group experimental design was used.

Participants were allocated randomly into intervention (N=116) or control (N=60) groups and pre and post tests were administered to both groups.

176 students (mixed sex) from grades 5 to 9 participated in the study.

### **Data-collection tools/validity and reliability**

Two types of data were collected:

Data from school sources: demographic; disciplinary code violations; attendance; grade point averages

Data collected specially using self-report measures: reports of violent behaviour; drug use; knowledge of the intervention materials; attitudes to violence; recourse to non-violent methods of dealing with problems

### **Reliability and validity**

The data-collection tools were administered during classroom intervention time by individual trainers. To control for possible effects associated with a particular trainer, the authors randomly re-assigned the trainers to different treatment classes at the midpoint of the study. They stayed with that class for the duration of the training. Daily meetings were held with the trainers and the principal investigator to ensure that the classes were being taught the same material in the same manner.

The principal investigator also observed each trainer each day to ensure that the trainers were following the script for each lesson, which included the way in which the test (data collection) was administered.

### **Methods, reliability and validity of analysis**

The data was analysed by statistical methods. T-tests were used almost exclusively with one three-way ANOVA administered to ascertain whether there were significant differences in the results of boys or girls and between different grades.

### **Reliability and validity**

Cohen's Kappa was used to determine inter-rater reliability for each measure when classifying the students' responses.

When analysing the results, two different coders, who were advanced doctoral students in social psychology, coded all the students' responses independently. The students' responses were also classified according to two existing (referenced) scales.

### **Summary of results**

The results indicated that students in the intervention group had successfully learned the negotiation procedures. Before training, most students in both groups used strategies other than negotiation to resolve their conflicts. One week after the end of training, over 75% of the students in the intervention group listed 100% of the negotiation steps as the procedure they would use to resolve their conflicts. In the control condition, the number of negotiation steps known before and after the training did not change significantly.

There were no significant differences among grade levels or between boys and girls on this measure.

### **Conclusions**

Overall the authors state that, 'From these results, students from the sixth to the ninth grades who were given training in how to negotiate integrative solutions to interpersonal conflicts learned the negotiation procedure and could see themselves as using it to resolve their conflicts' (p 18).

Weight of evidence A: High

Weight of evidence B: High

Weight of evidence C: High

Weight of evidence D: High

## **Orpinas P, Kelder S, Frankowski R, Murray N, Zhang Q, McAlister A (2000) Outcome evaluation of a multi-component violence-prevention program for middle schools: the Students for Peace project**

### **Country of study**

USA

### **Age of learners**

11-16

### **Type of study**

Researcher-manipulated evaluation: randomised controlled trial

### **Aims of the study**

To evaluate the effect of Students for Peace, a multi-component violence-prevention intervention, on reducing aggressive behaviours among students of eight middle schools randomly assigned into intervention or control conditions

### Description of the intervention

Students for Peace: Violence Prevention Program

The Students for Peace interventions included four main elements: (1) a School Health Promotion Council to organise and co-ordinate school wide intervention activities, and to influence organisational change at the school level; (2) a violence-prevention curriculum providing conflict-resolution knowledge and skills; (3) peer mediation and leadership training to modify social norms about violence and to provide alternatives to violence; and (4) parent education via newsletters presenting role models that parents can emulate at home to reduce conflict and aggression.

School Health Promotion Council

The School Health Promotion Council formed at each school includes a site co-ordinator, teachers, a school administrator, and a school nurse or counsellor. The council meets monthly to co-ordinate the intervention components and to try and influence school organizational change.

### Curriculum

'Second Step: A Violence Prevention Curriculum' is a classroom-based violence-prevention curriculum. The curriculum includes information about violence and trains students in empathy, conflict resolution, and anger management. The skills-based teacher-taught curriculum consists of 15 lessons, each approximately 80 minutes long.

Peer training: Peer Mediation and Peers Helping Peers

The Peer Mediation Programme trains students to mediate conflicts, both formally and informally, among other students. The Peers Helping Peers programme trains students to meet one-on-one with students who request their help with personal problems, such as alcohol and drug use, school attendance, conflicts with other students or within their family, and academic problems.

Parent education

Parents' newsletters included information on positive conflict-resolution tactics, and how to reduce their own modelling and praise of aggressive behaviour. There are articles on student and parent role models, with each relaying an event where they behaved non-violently with their contact details to encourage further community involvement. Parental involvement is elicited through parents: (1) review of the story content, (2) approval of the modelled course of action, and (3) recommendation that their child imitate the model.

### Summary of study design and sample

In this study, eight middle schools (sixth to eighth graders) were divided into matched pairs and then one of each pair was randomly assigned to either intervention or control conditions. In the spring of 1994, a baseline student survey was administered to all students in the participating schools before matching the schools. Schools were first matched on ethnic composition of students. During the summer of 1994, schools were randomised into intervention or control conditions. Active intervention began in September 1994.

The evaluation design included a cross-section and a cohort evaluation. A survey was administered to all students of the eight participating schools in the spring of 1994, 1995 and 1996. Sixth graders of 1994 were followed through seventh grade in 1995 and eighth grade in 1996. Students who completed at least one follow-up evaluation constituted our cohort. In addition to the student survey, teachers and administrators completed yearly surveys.

It was a mixed sex sample with participants aged between 11 and 14 years of age. The cohort study included 2,246 participants and the cross-sectional included approximately 9,000 students.

### Data-collection tools/validity and reliability

Indicators of students' aggressive behaviours were measured by the aggression scale, frequency of fights at school and frequency of injuries due to fights. The aggression scale is a self-report measure of aggressive acts committed during the week prior to the survey.

The authors chose to use scales which have already been established and previously validated tools. They have also tested the internal consistency of the Aggression scale using Cronback's alpha at the pilot and baseline and tested the stability over time.

### Methods, reliability and validity of analysis

The authors use multivariate analysis and multi-level modelling to analyse the results. The main analysis of the cohort data was based on a nested cohort design model that used an adjusted time by treatment analysis. The analysis for the cross-sectional data was based on a nested cross-sectional model, with the covariates race/ethnicity and academic performance, but without the repeated measures on the student.

### Reliability and validity

The authors state that they tried to increase the reliability and validity of the data analysis by using a hybrid design, in which schools were matched. However, the results were analysed as if matching did not occur because this design improves power and preserves the Type I error.

### Summary of results

At baseline, intervention and control groups did not differ significantly on any violence-related variables, measured on a self-report survey of aggressive behaviour and perceptions of school safety. Results from both the cohort and cross-sectional evaluations suggested that the intervention had little or no effect in reducing aggressive behaviours, fights at school, injuries due to fighting, missing classes because of feeling unsafe at school, or being threatened with harm. For all variables, the strongest predictors of violence in eighth grade were violence in sixth grade and low academic performance.

### Conclusions

A comprehensive approach to violence prevention in schools is difficult to implement. It may require

a long time and a strong commitment by teachers, administrators and staff to achieve peaceful conflict resolutions. Given that the strongest predictor of violence in eight grade was previous aggression, prevention programmes should start earlier.

Finally, the authors conclude that school-based interventions should not neglect the family and the community, which can increase students' risk for violence and make 'student-centred' approaches less effective. Violence-prevention interventions should explore strategies that include both the families and the communities.' (p 57)

Weight of evidence A: High trustworthiness

Weight of evidence B: High trustworthiness

Weight of evidence C: High trustworthiness

Weight of evidence D: High trustworthiness

### **Smith SW, Daunic AP, Miller MD, Robinson TR (2002) Conflict resolution and peer mediation in middle schools: extending the process and outcome knowledge base**

#### **Country of study**

Australia

#### **Age of learners**

11-16: Grades 6, 7, 8 at middle schools

#### **Type of study**

Researcher-manipulated evaluation: controlled trial

#### **Aims of the study**

The aim of this study was to extend the process and outcome knowledge base on conflict resolution and peer mediation programmes in middle schools, through (1) collecting attitudinal data from teachers and students before and after implementation; (2) collecting information about the type of conflicts mediated; (3) measuring attitudinal change in mediators resulting from peer mediation training and experience; and (4) surveying middle school disputants, peer mediators and parents to identify perceptions about the peer mediation process and views about conflict.

#### **Description of the intervention**

School-wide conflict resolution curriculum and a programme of peer mediation training

One teacher from each project school attended mediation training and returned to the school to implement the peer mediation programme as a complement to existing welfare strategies.

It covered five lessons and dealt with issues, such as understanding conflict, effective communication, and mediation.

In addition, 25 to 30 children in each school received peer mediation training in a two-day workshop run by school staff that had been trained by project staff.

#### **Summary of study design and sample**

This was a delayed treatment design. The authors describe this as a four-year study with a first year focus on developing and piloting instruments, data-collection protocols, and curriculum. During the second, third and fourth years, a delayed-treatment design was implemented across three schools. In the second year, one school began the conflict resolution - peer mediation programme, with the other two schools as control groups. In the third year, the two remaining schools began the conflict resolution - peer mediation programme, and the first school continued with it. In the fourth year, all schools continued with the programme.

Data were collected from (a) all teachers and students, (b) peer mediators and matched control sample, (c) parents of peer mediators, and (d) disputants.

85 peer mediators and 85 matched controls were selected from within the total student sample.

Approximately 3,500 students (mixed sex) and 200 teachers participated in the surveys.

#### **Data-collection tools/validity and reliability**

Data was collected using the following instruments: Student Attitudinal Survey, School Climate Survey (administered to teachers), Peer Mediator Generalization Questionnaire, Mediator Parent Questionnaire (administered to parents), and Disputant Questionnaire.

Data were also collected about mediations (type of conflict, type of solution) and about school level reports of disciplinary incidents and referrals.

#### **Reliability and validity**

Each questionnaire item was pilot tested for readability, item clarity, item misinterpretation and length of administration with a small group of students at two schools.

The researchers conducted a large-scale field study for each instrument to examine item characteristics and internal scale consistencies.

Cronbach's Alpha scores are shown for each subscale on the Student Attitudinal Survey, the Disputant Questionnaire, the Conflict Resolution Scale and the School Climate Survey.

Experts (school-based teachers and university faculty) reviewed all instruments for content validity.

#### **Methods, reliability and validity of analysis**

There is no section in the paper that details the methods of analysis but we can work out that the data on incidents were graphed to look for trends over time in relation to the start of the intervention.

Some statistical testing was also done to produce p values and t-tests were also administered to compare pre-and post-mediation training scores and pre- and post-intervention disciplinary referrals.

Whole school survey data was compared but not much detail was provided.

Data on disputes were explored for the period of the intervention looking at reason for dispute and type of resolution. These were compared by the

characteristics of the peer mediators (grade and gender).

The attitudes of peer mediators were compared with controls in matched pairs - although how this was carried out was not statistically reported.

Correlations to measure the relationship between mediator experience (number of mediations conducted) and attitudes to conflict resolution took place.

Chi-squared for mediation descriptive data (age, gender, type of conflict resolution used, issue type) were also used.

Details of a content analysis to sort conflict issues and resolution types were also presented.

### **Reliability and validity**

No details of reliability or validity were given.

### **Summary of results**

The curriculum and mediation programme did not result in a significant school wide change in student attitudes towards conflict and communication or in teachers' attitudes to school climate. However, the total number of disciplinary incidents per month and a subset of incidents reflective of social conflict tended to decline at each school following the initiation of the peer mediation programme. (p 575).

Sixth-graders used mediation more frequently than seventh or eighth graders. Verbal harassment was the most common type of dispute negotiated. There was a significant relationship between disputant gender and issue type, with boys more likely to engage in physical aggression, and girls in conflicts concerning gossip. Boys were less likely to 'agree to get along' than girls. Conflicts concerning gossip decreased as grade level increased. 'Agree to get along' resolutions increased as grade level increased. (pp 577-578)

No significant changes were attributable to PM training or experience for peer mediators, compared with the matched controls on the Student Attitudinal Survey or Conflict Resolution Scale. The amount of mediation experience also had no effect. However, mediator ratings of teacher communication became less positive from pre-training to follow-up, regardless of the amount of mediation experience. (p 578)

### **Conclusions**

They authors conclude 'In evaluating the present CR-PM programs... we believe that evidence of successful process (e.g. successful resolution of conflicts, program satisfaction, generalized skills) was also indicative of effective instructional programming.' (p 584). The authors refer to process data to support this contention, such as mediator and disputant satisfaction, and parental belief that their children's mediation skills had generalized to conflict situations outside school.

Weight of evidence A: Low

The authors state that, given the brief nature of the intervention curriculum, they did not expect it significantly to alter student attitudes or school climate. This was indeed their main finding. However,

the flaws in design and delivery mean that the results should be categorised as low in trustworthiness.

Weight of evidence B: Medium

The study used a delayed-treatment design to investigate attitudinal change in response to a conflict resolution/peer mediation programme. Data was collected using questionnaires containing subscales relevant to the review question, such as communication, openness to differences, and the effect of poor communication on conflicts. Further questionnaires measured the extent to which peer mediators applied learned skills to novel situations in school, out of school, and at home, and participant satisfaction with the mediation process. However, there were no behavioural outcome measures, except incidence of disciplinary referrals.

Weight of evidence C: High

Weight of evidence D: Low

## **Soutter A, McKenzie A (1998) Evaluation of the dispute resolution project in Australian secondary schools**

### **Country of study**

Australia

### **Age of learners**

14-16

### **Type of study**

Naturally occurring evaluation

### **Aims of the study**

The main aim of the evaluation was to evaluate a dispute resolution project developed for students in secondary schools by the Department of School Education and the Community Justice Centres of New South Wales.

### **Description of the intervention**

Dispute resolution project

Fifteen schools selected a teacher willing to undergo training as a community mediator.

The teachers returned to the schools to implement a peer mediation process and a develop a plan to raise awareness in the whole school

Six to ten students in the schools were trained each year as peer mediators, leading to there being around 12-20 peer mediators at any one time in each school.

### **Summary of study design and sample**

This paper reports on a 1997 evaluation of the 'maintenance phase' of a peer mediation project, which was originally implemented in 1995; A comparison of 15 intervention schools with control schools 'matched for size and drawing area'.

It is not clear when the control schools were selected, although they appear to have been part of the pilot evaluation since the results report change over time in the project and in the control schools.

The sample comprised school principals, programme co-ordinators, teachers, parents, peer mediators and students.

#### **Data-collection tools/validity and reliability**

Interviews with school principals, programme co-ordinators, teachers, parents, peer mediators and disputants

Questionnaires to students, teachers, disputant and parents

Self-completion questionnaires were filled in by each school in three of the 15 project schools from different regions of New South Wales and three matched control schools

#### **Methods, reliability and validity of analysis**

Questionnaire responses were analysed and compared between project and control schools. Project and control schools were compared over time between 1995 and 1997.

Interview data was analysed thematically.

It appears that, for the questionnaire data, t-tests or similar were conducted on the scores of project and control schools.

#### **Reliability and validity**

No reliability/validity issues were reported.

#### **Summary of results**

Compared with control schools, dispute resolution project schools reported: lower frequency of fighting as a cause of disputes ( $p=0.014$ ); lower frequency of 'avoidance' as a means of resolving disputes ( $p=0.036$ ); lower frequency of disputes resolved by disciplinary warning ( $p=0.021$ ); higher frequency of teachers discussing disputes with both parties ( $p=0.005$ ); higher frequency of talking with teacher/counsellor ( $p=0.031$ ).

When compared with control schools between 1995 and 1997, control schools reported a higher frequency of suspensions in 1997 ( $p=0.2$ ); lower frequency of reporting that disputes could be resolved by discussion in 1997 ( $p<0.001$ ); lower frequency of reporting that disputes were resolved by fighting in 1997 ( $p<0.001$ ); higher frequency of 'avoidance' as a means of dispute resolution in 1997 ( $p<0.004$ ); higher frequency of students sent by teachers to the executive in 1997. Dispute resolution project schools had a higher frequency of reporting that the school develops dispute resolution skills in 1997 than in 1995 ( $p=0.001$ ).

Interview data revealed that peer mediators benefited through greater confidence, tolerance of others, self-esteem, enhanced communication and interpersonal skills, leadership opportunities and conflict resolution skill.

The effectiveness of the programme depended greatly on the quality and skills of the co-ordinator, but, overall, students were more aware of the nature of disputes, their consequences, and the means of resolving them.

#### **Conclusions**

Peer mediation made 'a difference' in the Dispute Resolution Project schools, enhancing awareness of

ways of resolving conflicts without fighting, reducing discipline problems, and enhancing communication both at school and at home. There was some degeneration in the control schools in student perceptions of conflict and means of resolution, which did not occur in Dispute Resolution Project schools. However, differences between the DRP and control schools were small.

Weight of evidence A: Low

Not able to rely on these results as they are presented, because it is not known how they were obtained or how selective they might be.

Weight of evidence B: Medium

Medium to low.

In principle, the comparison of project schools with matched control schools is an appropriate way to address the review question. However, in this study, potential sources of bias are not well controlled and there is insufficient analysis of the results.

Weight of evidence C: High

Weight of evidence D: Low trustworthiness

### **Stevahn L, Johnson DW, Johnson RT, Laginski AM, O'Coin I (1996) Effects on high school students of integrating conflict resolution and peer mediation training into an academic unit**

#### **Country of study**

Canada

#### **Age of learners**

14-15

#### **Type of study**

Researcher-manipulated evaluation: randomised controlled trial

#### **Aims of the study**

In this study, the conflict resolution and peer mediation programme was integrated into an academic unit in order to determine whether it enhances or detracts from academic learning. The second purpose of this study is to determine whether the integration of conflict resolution and peer mediation training into an academic unit would increase or decrease academic achievement. High school students' attitudes toward conflict were also assessed before and after training to determine whether their attitudes were positive or negative, and whether the conflict resolution and peer mediation training changed the students' attitudes.

The conflict resolution and peer mediation program integrated into an academic unit.

#### **Description of the intervention**

Academic unit

Students read the novel alone and worked in pairs to complete their notebook assignments. The pairs of students (1) orally identified conflicts between characters that occurred in each chapter, (2) orally described selected conflicts, (3) scripted

what each character in a conflict would say if he or she were using the integrative negotiation procedure to resolve the conflict, and (4) role-played the use of the integrative negotiation procedure to resolve the conflict.

The integrative negotiation procedure consisted of six steps: (1) describing what you want, (2) describing how you feel, (3) explaining the reasons underlying your wants and feelings, (4) reversing perspectives, (5) inventing at least three optional agreements for mutual gain, and (6) reaching an integrative agreement.

The mediation procedure consisted of four steps: (1) ending hostilities, (2) ensuring commitment to mediation, (3) facilitating negotiations and (4) formalising the agreement.

Students learned the steps in the class sessions through a variety of interactive activities and practised the steps in the remaining class sessions through scripting and role-playing conflicts portrayed in the novel. Students divided their class time between reading the novel, completing their notebooks, learning the integrative negotiation procedure and using the procedure in script-writing and role-playing.

#### **Summary of study design and sample**

A pre-test/post-test control-group experimental design was employed. Students randomly assigned to the experimental condition spent ten hours studying a literature unit into which conflict resolution training had been integrated. Students randomly assigned to the control condition studied the identical literature unit for ten hours without conflict resolution and peer mediation training

42 ninth-grade students participated in the study. The ratio of boy to girl was approximately 50:50.

#### **Data-collection tools/validity and reliability**

Academic achievement test: 15 open-ended questions focusing on major events in the story or on the entire novel

Retention of academic achievement test: 13 weeks after study ended, students answered four open-ended questions asking them to draw conclusions about characters and objects in the novel.

'How I manage conflicts' measure: Assessed students' total recall of the six-step negotiation procedure

Conflict scenario written measure: Students wrote essays describing what they would do in a conflict over access to a computer.

Conflict strategies scale: Assessed students' total recall of the six-step negotiation procedure.

'What conflict means to me': Students wrote words that came into their minds when they thought of conflict.

#### **Reliability and validity**

Cohen's Kappa reliability measures are given for the inter-rater reliability of the word association task.

The tools were based on existing tools which had been validated in previous work.

#### **Methods, reliability and validity of analysis**

Some of the data was categorised according to certain scales. Statistical tests were employed to determine the intervention's effect.

T-tests for differences between experimental and control groups. Repeated measures ANOVA for pre- and post-test comparisons.

#### **Reliability and validity**

Kappa was used to determine inter-rater reliability. They assert that it was a rigorous method.

#### **Summary of results**

The results indicated that students in the intervention class learned the negotiation procedure more completely than untrained students. When training ended, 76% of students in the experimental condition accurately recalled all the negotiation steps and a further 5% recalled nearly all the steps, while, in the control condition 89% listed zero steps. On a retention test, 13 weeks later, 62% of students in the experimental condition recalled all the negotiation steps and an additional 19% recalled nearly all the steps, while, in the control condition, 88% of students listed zero steps.

#### **Conclusions**

This study demonstrated that trained students not only learned and retained the negotiation procedure, but could and did use it to resolve a conflict. This indicates that a conflict resolution and peer mediation programme can be effective in teaching students to manage conflict constructively.

The study also provides important new data concerning the effectiveness of conflict resolution and peer mediation in schools by (1) providing a link between theory and practice, (2) providing a test of the hypotheses within a methodologically rigorous study, (3) focusing on a sample rarely studied, (4) validating the total-student-body approach to conflict resolution and peer mediation training, and (5) validating the feasibility of integrating conflict resolution and peer mediation training into an academic unit.

Weight of evidence A: High

Weight of evidence B: High

Weight of evidence C: High

Weight of evidence D: High

### **Stevahn L, Johnson DW, Johnson RT, Green K, Laginski AM (1997) Effects on high school students of conflict resolution training integrated into English literature**

#### **Country of study**

Canada

#### **Age of learners**

14-15

**Type of study**

Researcher-manipulated evaluation: randomised controlled trial

**Aims of the study**

The main aim of the study was to determine the effectiveness of a theoretically based conflict resolution programme in a Canadian senior high school, looking at the impact on academic achievement and students' ability to apply the procedure to classroom conflicts.

**Description of the intervention**

Conflict-resolution training integrated into the academic material

Academic Unit

Students were required to read a chapter or more a day and to write assignments in a notebook.

Students worked in pairs to complete the notebook and the following additional assignments:

- (a) Identifying the conflicts in the assigned chapter(s)
- (b) Writing a description of one of the conflicts
- (c) Writing what each character would say if he or she were using the negotiation procedure to resolve the conflict
- (d) Role-playing the use of the negotiation procedure to resolve the conflict

The training programme combined the following:

Integrative negotiation: Focuses disputants on finding a mutually satisfying solution to problems

Perspective reversal procedures: Focuses disputants on viewing the conflict from both points of views

The six-step procedure consisted of (1) describing what you want, (2) describing how you feel, (3) explaining the reasons underlying your wants and feelings, (4) reversing perspectives, (5) inventing at least three optional agreements for mutual gain, and (6) reaching an integrative agreement.

It was taught in class session; the teacher modelled the procedure, explained it to the students, and had students practise it. Students divided their time between studying the novel, learning the integrative-negotiation procedure, and using the procedure daily in their script-writing and role-playing of conflicts portrayed in the novel.

Eight class sessions, for a total of 9 hours 30 minutes of instruction.

**Summary of study design and sample**

Pre-post/experimental control-group design consisting of two conditions (integrated English curriculum with conflict resolution training/standard English curriculum) and four dependent variables: academic achievement, mastery of negotiation procedure, and retention of negotiation procedure, ability to apply negotiation procedure.

The sample included 42 ninth-grade students, 14 of whom were boys, 26 were girls.

**Data-collection tools/validity and reliability**

Curriculum-based assessment: Academic test of achievement on the novel studied

'The How I Manage Conflicts' measure: Assessed the students' recall of the steps in the negotiation procedure

Conflict Scenario Written Measure: Paper-and-pencil measure in which students read two brief scenarios, both ending in an unresolved conflict.

To assess long-term retention of academic learning paper and pencil measure consisting of four open-ended questions on topics studied in the unit were readministered seven months later.

**Reliability and validity**

The authors used more than one measure to classify students' learned negotiation skills.

The conflict measures used have been developed and used in previous studies by Johnson and Johnson, and two of the authors of this paper.

**Methods, reliability and validity of analysis**

Students' responses to written measures were classified, then statistically tested using T-tests.

Students' strategies were categorised in two ways: first, by means of the Strategy Constructiveness Scale, whereby responses were categorised according to the strategy used to deal with the conflict; and second, by placing the strategies on a continuum from 0 to 12, from most destructive (physical and verbal aggression and avoidance) to most constructive (invoking norms for appropriate behaviour, proposing alternatives, and negotiating).

**Reliability and validity**

Classification of conflict strategies was conducted by three raters (two professors/one graduate student), using two sets of categories, with an interrater reliability of 0.93 and 0.92 respectively

They also looked for differences between classes and genders before combining all students in the experimental group for subsequent analysis.

**Summary of results**

Students in the experimental condition also managed hypothetical conflicts more constructively than those in the control class. Prior to the intervention, no student in either condition attempted to use negotiation to resolve a conflict. After training, students in the intervention class showed a greater willingness to use negotiation as their major strategy for dealing with conflict (48%), whereas students in the control class continued to deal with conflict by telling the teacher or by forcing concessions. Students in the intervention class also developed more positive attitudes towards conflict than their control-group peers.

**Conclusions**

Combining conflict resolution training with the study of a novel had a significant and positive effect on students' academic achievement. The literature unit provided an effective context for learning to negotiate (85% of students demonstrated complete mastery of the negotiation procedure, and the remaining students recalled four of the six steps). The pre-and post-training com-

parisons between the groups indicated that training had a significant effect on students' abilities to apply the negotiation procedure to conflict scenarios. The results indicated that, although students applied the negotiation procedures to conflicts in the novel, they subsequently transferred their skills to more personal conflicts, and several applied their skills to conflicts outside the classroom.

The authors claim to have (a) demonstrated a link between conflict/negotiation theories and practice; (b) provided a test of the hypotheses within a methodologically rigorous study; and (c) provided a focus on a high-school Canadian sample rarely studied.

Weight of evidence A: High

Weight of evidence B: High

Weight of evidence C: High

Weight of evidence D: High

### **Stevahn L, Johnson DW, Johnson RT, Schultz R (2002) Effects of conflict resolution training integrated into a high school social studies curriculum**

#### **Country of study**

USA

#### **Age of learners**

14

#### **Type of study**

Researcher-manipulated evaluation: randomised controlled trial

#### **Aims of the study**

The aim of the study was to examine the effectiveness of conflict resolution and peer mediation training and its impact on academic achievement, when integrated into a social studies curriculum for Californian high school students.

#### **Description of the intervention**

Conflict resolution and peer mediation procedures as an integrated component of a social studies class  
Academic unit

Students completed notebooks containing assignments requiring conceptual analysis of selected events and issues pertaining to the Second World War (1939-45) and the students' personal reflections on those events and issues.

The conflict resolution and the peer mediation training consisted of three parts:

(a) What constitutes conflict?: Students learned when a conflict was or was not present.

(b) The negotiation procedure consisted of six steps: (1) describing what you want, (2) describing how you feel, (3) explaining the reasons underlying your wants and feelings, (4) reversing perspectives, (5) inventing at least three optional agreements for mutual gain, and (6) reaching an integrative agreement.

(c) The mediation procedure consisted of four steps: (1) ending hostilities, (2) ensuring commit-

ment to mediation, (3) facilitating negotiations, and (4) formalising the agreement.

The classes meet every other day in 105 blocks for five consecutive weeks.

#### **Summary of study design and sample**

Two classes were randomly assigned to receive 5 weeks of conflict resolution and peer mediation training integrated into a required social studies curriculum (The World Civilization course). The remaining two classes studied the same social studies curriculum for an identical period of time without the conflict resolution and peer mediation training. Classes met every other day for 105 minutes. Total instruction time was 17.5 hours.

Four 9th grade classes, each with between 20 and 25 mixed sex students participated.

#### **Data-collection tools/validity and reliability**

Curriculum-based assessment: Assessed academic achievement on the academic unit studies

The 'How I manage conflicts' measure: Assessed the students' recall of the six steps in the negotiation procedure.

Conflict Scenario Written measure: a paper-and-pencil measure in which students read two brief scenarios, both ending in an unresolved conflict and tested students ability to apply the negotiation or peer mediation procedure to scenario presented.

Integrative bargaining measure: Involved pairs of students who had to use negotiate skills to maximise their own outcomes (distributive) or their joint outcomes (integrative).

Exams: Assessed students' ability to analyse conflicts in different academic areas

Conflict-word association task: Assessed students attitudes toward conflict

Team project: Assessed student behaviour in real conflict with a classmate. Students with different preferences had to negotiate and describe in writing how they reached agreement on a topic for a joint project

To assess long-term retention of academic learning, four open-ended questions on topics studied in the unit were readministered seven months later.

#### **Reliability and validity**

The ability to apply the negotiation procedure was measured using both the conflict scenario test and an actual conflict situation measure. To assess attitude towards conflict, a paper and pencil test and a notebook-contents measure were used.

To verify the fidelity of the integrative bargaining measure, an independent observer checked a sample of completed notebooks for consistency across trained and untrained classes, and the measure included two different scenarios; therefore the results of both could be compared.

Some of the measures were used in previous studies by the same authors, and are used again or adapted for use here: for example, the conflict scenario task, the 'How I manage conflicts' task, and the integrative bargaining measure.

Responses to some tests were classified using a strategy constructiveness scale derived from content analysis and based on constructive conflict resolution theory.

Authors state that they attempted to address internal validity by

- (a) randomly assigning students to classes and class conditions
- (b) careful implementation of conditions
- (c) checks for training fidelity in both conditions
- (d) use of the same social studies curriculum in both conditions for five weeks
- (e) use of a wide variety of pre/post and retention measures

The authors also attempted to address external validity by integrating the conflict resolution training into the academic unit.

### **Methods, reliability and validity of analysis**

The results were analysed by the following methods:

Scores on outcome measures from trained and untrained classes were compared.

Unpaired t-tests between experimental and control conditions were compared.

Conflict scenario task and team project task were analysed by using (a) strategy constructiveness scale, and (b) counting the frequency of use of negotiation steps.

Attitudes towards conflict were analysed on both word association measure and notebook contents measure.

The authors conducted a two-way ANOVA on trained versus untrained classes, and early versus late morning classes.

### **Reliability and validity**

The data was analysed in more than one way to compare results and the authors state they attempted to establish a high level of internal and external validity (see data collection)

### **Summary of results**

Results suggest that the trained students, compared with the untrained students, learned the integrative negotiation and peer mediation procedures better. After training, 92% of the trained students recalled all or nearly all the negotiation steps, while 93% of the untrained students listed zero steps. At seven months, there was still a significant difference between the trained and the untrained students' knowledge of the negotiation procedure.

With regard to the ability to apply negotiation procedures, there were no significant differences between the experimental and control groups before training. After the intervention, however, trained students were able to apply the procedures more completely, and were more likely to choose an integrative over a distributive approach to conflict. In the computer access and classmate betrayal scenarios, trained students used an average of three to four negotiation steps to resolve the conflict, whereas untrained students used none. In the team project task, 59% of trained stu-

dent pairs used integrative negotiation to reach an agreement, compared with 9% of untrained student pairs. In the integrative bargaining tasks, trained pairs performed significantly better than untrained pairs, reaching agreements which yielded higher joint monetary profits and more vacation hours.

### **Conclusions**

The authors conclude that they have added important new data on the effectiveness of school-based conflict resolution and peer mediation training programmes in several ways:

(1) The programme bridged theory and practice, and validated the efficacy of conflict resolution and peer mediation procedures in a real-life setting.

(2) They examined the effectiveness of conflict resolution and peer mediation training by using sound methodology.

(3) They are the first to examine the impact of a curriculum-integrated approach to conflict resolution and peer mediation on US high school students in a social studies curriculum.

(4) They have validated the 'total-student-body' approach to conflict and peer mediation training. Their evidence suggests that students do not learn or apply integrative negotiation or peer mediation strategies without training; they have demonstrated that it is possible to train all students in a class, and therefore by implication, in a school.

(5) They have validated the feasibility and efficacy of integrating conflict resolution and peer mediation training into academic courses.

Schools need to become 'conflict-positive communities' in which all members face and manage their conflicts routinely. Schools must make a commitment to equip all students and staff with the tools to do so.

Weight of evidence A: High

Weight of evidence B: High

Weight of evidence C: High

Weight of evidence D: High

The results of this systematic review are available in four formats:

**SUMMARY**

Explains the purpose of the review and the main messages from the research evidence

**REPORT**

Describes the background and the findings of the review(s) but without full technical details of the methods used

**TECHNICAL REPORT**

Includes the background, main findings, and full technical details of the review

**DATABASES**

Access to codings describing each research study included in the review

These can be downloaded or accessed at <http://eppi.ioe.ac.uk/reel/>

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