Evidence Based Approaches to Reducing Gang Violence

A Rapid Evidence Assessment for Aston and Handsworth Operational Group

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The views expressed in this report are those of the authors, not necessarily those of the Home Office or Government Office West Midlands (nor do they reflect Government policy).

(Version 2)
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Glossary

Census tract

Specific to the USA, tracts are small geographical areas established by local committees and approved by the Census Bureau. They contain a population segment with relatively uniform economic and social characteristics and have clearly identifiable boundaries. They usually contain between 2,500 and 8,000 inhabitants.

Counterfactual

The situation or condition as it hypothetically would be if there was no intervention.

Grey literature

Unpublished studies or work in progress.

Heterogeneous

Coming from different origins, having considerably different attributes.

Homogeneous/Homogeneity

Coming from the same origin, being the same or having identical attributes.

Maryland scale of scientific methods

A five-point scale designed by the University of Maryland to classify the strength of scientific evidence, it does not classify the strength of a programme's or intervention's effect.

Meta-analysis

A statistical method of combining and summarising the results of studies within a systematic review, that meets minimum quality criteria.

Multi-modal

An intervention with multiple components.

Narrative review

A literature review in which reviewers collate relevant studies and draw conclusions from them, but which does not make their methods or decision making rules explicit.
Primary study

A piece of research that produces original data in order to answer a specific question.

Publication bias

The selective or multiple publication or suppression of research results so that the scientific record is distorted. For example, the greater likelihood of studies with positive results being published.

Quality assessment tool (QAT)

An assessment framework used to grade the methodological quality of studies for this REA, developed by central Home Office researchers.

Rapid evidence assessment (REA)

A review of evidence that follows the principles of a systematic review, but concessions are made in order to complete reviews in a shorter time scale. Grey literature is not included.

Reporting district

Police geographical boundaries for small patrol areas. They vary in size and demography.

Social marketing

Using marketing to influence social behaviour for society’s benefit.

Systematic review

Reviewers systematically identify all relevant primary studies, which are then systematically appraised and summarised according to an explicit and reproducible methodology.
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Evidence Based Approaches to Reducing Gang Violence: 
Executive Summary

Q. What is effective in preventing or reducing young people’s involvement in gang and gun related activity, as victims or offenders?

A. - The co-ordination of gang reduction activity through a multi-agency, multi-modal strategy, specific to one city or locality
   - Civil injunctions
   - Peer mentoring
   - School based learning

Recommendations
The main findings were that effective interventions:
1. Adopt a problem-solving approach and analyse the local problem rather than simply importing an intervention
2. Have a strong management structure with clear leadership of the intervention
3. Support partnership working by adopting a collaborative approach among front line staff
4. Target behaviour (gang violence) rather than affiliation (gang membership). This applies to all interventions, whether strategic or tactical
5. Offer both a ‘carrot’ by providing opportunities out of gang activity through employment, training, treatment and family support, and a ‘stick’ through enforcement, prohibitions and sanctions
6. Focus both on reducing incidence and reducing lethality
7. Exchange information both formally and informally
8. Engage community groups and voluntary groups via existing networks
9. Market effectively. Once a strategy is agreed it should be marketed to the target audience and the wider community. The enforcement elements of the strategy should be implemented consistently and as advertised

Background and Methodology
A rapid evidence assessment (REA) was commissioned by the Aston and Handsworth Operational Group (AHOG) to provide an evidence base for decision-making. An REA is a systematic assessment of the best available evidence that differs from a literature review in terms of the processes applied to searching for and critically appraising the evidence. Only those studies with a robust methodology are considered.

Future Implications
Gang and gun related interventions should monitor and evaluate their effectiveness, including cost effectiveness to add to the evidence base. Establishing a research sub-group and developing a performance assessment framework should facilitate this process.

Authors: Gavin Butler, James Hodgkinson, Elizabeth Holmes and Sally Marshall 2004
Introduction

The shootings of two young women in Aston, Birmingham on 2\textsuperscript{nd} January 2003 focused the efforts of a range of agencies in addressing gang-related behaviour in the city. The City Strategic Partnership in Birmingham convened a strategic group to consider issues relating to the proliferation of guns and gangs in Aston and Handsworth. Their response required the development of an operational management forum (Aston and Handsworth Operational Group, AHOG), drawn from middle managers already operating in the area, to agree a strategy designed to review and re-focus their work and to improve the responsiveness of their services. A number of key strands were identified and agreed and formed the basis of a work programme for AHOG. These strands are:

- Research
- Communication
- Interventions for young people who are at risk of getting involved in guns and gangs
- Enforcement

Government Office West Midlands (GOWM) were given the lead on the research strand and agreed to support AHOG in this approach, with the specific role in advising the group on the available evidence of ‘what works’ and what is effective in this area.

Identifying high quality evidence in relation to reducing or preventing gang activity has been challenging. Although a number of narrative reviews are readily available, they are concentrated on explanations of risk factors, gang definitions, or sociological explanations of phenomena like masculinity and gang membership. In short, they are not focused on the effectiveness of approaches or interventions designed to prevent or reduce gang-related problems.

In order to develop an evidence-based strategy for tackling gun crime in Birmingham, AHOG commissioned GOWM and the Home Office Regional Research Team to undertake a rapid evidence assessment (REA) to assess what is effective in preventing or reducing young people’s involvement in gang and gun related activity, as victims or offenders. The details of this assessment are presented in this report.
Methodology

Introduction to Systematic Reviews

In order to establish effective practice in dealing with a specific problem it is important to determine what is known about the issue in question from the full range of existing evidence. Traditionally, a narrative or literature review would be undertaken to search this evidence; however, there are limitations with this approach. Principally, they are susceptible to selection and/or publication biases as literature reviews are often opportunistic in that they review only literature and evidence that is readily available to the researcher.

Systematic reviews of existing literature are increasingly being used as a valid and reliable means of harnessing existing research evidence. They differ from literature reviews by:

- Being more systematic and rigorous in the ways in which they search and find existing evidence.

- Having explicit and transparent criteria for appraising the quality of existing research evidence, especially identifying and controlling for different types of bias in existing studies.

- Having explicit ways of establishing the comparability (or incomparability) of different studies and, thereby, of combining and establishing a cumulative effect of what the existing evidence is telling us.

(Davies, 2003:4)

Systematic reviews involve a systematic, rigorous and exhaustive search of all the relevant literature. Searches are conducted using electronic and print sources, hand searching and relevant 'grey' literature (i.e. unpublished studies or work in progress) is identified. This approach helps to remove the problems of bias associated with traditional literature reviews. The search criteria used in undertaking a systematic review and the criteria by which the literature is appraised and interpreted are clearly defined. This leads to greater transparency and allows future studies to be added to the review, enabling an interactive and cumulative body of sound evidence to be developed on a subject area.

Where appropriate statistical meta-analysis is undertaken. This is a statistical method for combining and summarising the results of studies in a systematic review. However, for this to take place there must be homogeneity between the studies or the analysis could be comparing 'apples with pears' and falsely combining studies that are not compatible.
Background to Rapid Evidence Assessments

Undertaking a systematic review takes time, typically around six months to a year. Users of research and evaluation evidence often need quicker access to what the existing evidence is telling them. To this end, rapid evidence assessments have been developed for use in public policy research and evaluation. REAs are based on the principles of a systematic review. The functions of an REA are to:

- Search the electronic and print literature as comprehensively as possible within the constraints of a policy or practice timetable
- Collate descriptive outlines of the available evidence on a topic
- Critically appraise the evidence (including an economic appraisal)
- Sift out studies of poor quality
- Provide an overview of what the evidence is saying

(Davies, 2003)

Like systematic reviews, they are based on comprehensive electronic searches of appropriate databases and some searching of print materials, but in order to complete them in a shorter time frame concessions are made. As a result, exhaustive database searching, hand searching of journals and textbooks, or searches of ‘grey’ literature is not immediately undertaken. However, searching may be continued beyond the time available for an REA until a comprehensive search of the available research literature has been completed and a full-blown systematic review is achieved. In such cases, an REA would be better described as an interim evidence assessment.

All REAs carry the caveat that their conclusions may be subject to revision once more systematic and comprehensive reviews of the evidence base have been completed. This is consistent with the important principle that systematic reviews are only as good as their most recent updating and revision allows (Davies, 2003).

In order to inform and influence AHOG in a timely manner, this piece of research had to be completed within a three month time period. Given these time and resource constraints an REA approach was adopted as the methodology for this study. A meta-analysis was not undertaken because the studies identified were heterogeneous in terms of the types of intervention, the research methods used and the outcomes measured. Consequently, statistical combination and aggregation of study findings were not possible. A team of four staff from...
GOWM, the Youth and Street Crime Manager and three researchers from the Home Office Regional Research Team, carried out the REA. The Home Office provided library access and GOWM paid for the initial abstract search. There were no external sources of support.

**The Research Question**

This rapid evidence assessment was undertaken in order to address the following research question:

> What is effective in preventing or reducing young people’s involvement in gang and gun related activity, as victims or offenders?

**Search Criteria/Process**

As previously mentioned, REAs are based on comprehensive searches of electronic databases. A list of search terms was therefore developed with which to search relevant databases. GOWM commissioned the ESRC UK Centre for Evidence based Policy and Practice to undertake the searching. Appendix II gives a list of the search terms, databases used and the search process. The searches were undertaken as a one-off exercise. Developing this REA into a full systematic review would require the searches to be conducted iteratively.

In total, 311 abstracts (including duplicates) were elicited from the database search. This total was split in half, with two members of the review team assessing one half of the abstracts and the other two members of the review team assessing the other half. In order to minimise the time and resources required for the abstract sift, any studies undertaken before 1980 were not included. The abstracts were sifted on the basis of the following questions:

- Does the abstract address the research question?
- Is the paper based on a primary study examining the effectiveness of an intervention?

If the answer to both questions was ‘yes’, then the full paper was ordered for reading. Where the abstract provided insufficient information to assess either question, the full paper was also ordered.

Through this assessment a total of 93 papers were identified and called for. A database was created as a recording tool for the process. A further seven papers were later called for having been identified through the initial papers..
requested. These seven were not elicited from the original databases but appeared to be potentially relevant primary studies.

In order to complete the REA on time, a clear deadline had to be set beyond which papers were not considered. Any papers that came in after this date were not included in the REA. In the limited time available to undertake the REA, 69 papers were received. The remainder could either not be obtained via inter-library loan from the Home Office Library, the source of the paper could not be identified, or they were not received in time. A review of this REA is proposed for December 2004, when any further studies received will be considered and issues relating to this limitation can be explored. Undertaking a full systematic review would also remove this limitation.

The 69 papers were distributed amongst the review team and assessed for inclusion in the REA according to the strength of their evaluation methodology. An initial assessment was carried out using the “Maryland Scale”, devised by Sherman et al (1997) at the University of Maryland. Details of the scale can be found at Appendix III. Sherman and his colleagues argue that strong evidence of causality can only be shown by studies using a robust comparison group design. So in summary, only those studies with a robust comparison group design (point three and above on the “Maryland Scale”) were considered to be sufficiently robust for inclusion in the REA. A total of six papers met this criterion and were identified for a further detailed assessment.

The detailed assessment was carried out using a “Quality Assessment Tool” (QAT) devised specifically for this type of project. The QAT was based on a combination of more detailed criteria prepared by the University of Maryland Team mentioned above and criteria established by RDS researchers in the Home Office centrally (Deaton, 2004). Further details on the QAT can be found in appendix IV.

Each of the six studies was marked according to its methodology in four areas: sample selection, bias, data collection and data analysis. The average scores for each component were then added together to provide an overall score for the study. The minimum score available was 4, with a maximum score of 20. Those studies with the lowest scores were considered the most methodologically robust. As a minimum requirement, at least two reviewers were to assess the six papers or studies. In practice, all team members reviewed all six studies. All of the reviewers then discussed the studies at a team review meeting where any discrepancies between the QAT scores were resolved and a common score agreed. The strength of each study’s methodology was then graded using the following scale:

- Studies with a score of 4 to 7 were considered as methodologically strong (3 studies were identified)
- Studies with a score of 8 to 10 were considered average (2 studies were identified)
- Studies with a score of 11 and 12 were considered weak but eligible for consideration (1 study was identified)
- Studies with a score of greater than 12 were excluded from further consideration as they were considered to be so poor methodologically that the results could not be relied upon

This report is based on the findings from the six studies identified by the QAT scale.
Research Findings

This section provides details of the six interventions identified by the assessment process outlined in the methodology section. Overall, they fell under four main types of intervention. These are:

- The co-ordination of gang reduction activity through a multi-agency, multi-modal strategy, specific to one city or locality
- Civil injunctions
- Peer mentoring
- School based learning

A full description of each intervention, the outcomes achieved and its evaluation methodology can be found in Appendix I. In this section, each intervention is discussed further identifying:

- The nature of the programme
- The theory of change, that is, why the implementers thought that this intervention would be successful
- Brief details on the study methodology
- Brief details of the research findings
- The critical mechanisms, that is the elements of the programme that seemed to be most clearly linked with the effective outcomes

The interventions are grouped according to the strength of the evaluation methodology assessed through the QAT under the headings:

- Methodologically strongest
- Methodologically average
- Methodologically weak
**Methodologically strong studies**

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| 1 | Operation Ceasefire: The Boston Initiative | Boston Ceasefire is a multi-agency, multi-modal strategic intervention targeted at reducing gang violence, rather than gang membership. | "Exercising authority in the service of prevention" (Kennedy et al, 2001:48). Targeted disruption and enforcement tactics can be used not only to change the behaviours of the gangs targeted but also as a deterrent to modify the behaviour of the network of other gangs. | One-group time series before-and-after design, with non-randomised quasi-experimental comparisons with other large US cities. | Statistically significant reductions in monthly numbers of:  
  - youth homicide victims  
  - city-wide shots fired  
  - city-wide all age gun assault |  
  - Crackdown operations focused on behaviour - gang violence, rather than prohibiting an affiliation - gang membership.  
  - Problem orientated policing (POP) was applied to the youth homicide problem. Rigorous analysis of data was undertaken to identify the real problems rather than working on the basis of commonly accepted beliefs without foundation. The interventions emerged from a clear understanding of the research and analysis undertaken through this process.  
  - The working group recognised and understood their own
capabilities. Analysis highlighted a number of potential causal factors for the youth homicide problem including poverty, absent fathers and the availability of crack. However, none of the agencies involved in the working group had the capacity to deliver short-term impacts in these areas. They therefore kept refining their analysis until they found a foothold that offered a solution they could deliver.

− There were strong links between the researchers and practitioners; this was extremely important to the problem solving process. Researchers helped the working group to identify key issues and understand the logic of the proposed intervention.

− The interagency working group at practitioner level built upon existing information sharing between agencies. It provided an honest and forthright forum that facilitated and built trust between the professional cultures.

− Direct communication with gang members ensured that messages about why an operation was taking place and what it would take to make it stop were made clear. There were no deals; ending the violence that initially provoked the operation did not give gangs freedoms to commit other crimes. "This is a promise, not a deal". (Kennedy et al, 2001:31).

− Public messages about the plans and the outcomes of the interventions were made specific and personalised. They reported on individual offenders and the areas to be targeted. This is in line with the literature on decision making, most recently in Schwartz (2004), that effective communication will rest on messages that are vivid, salient and emotionally engaging, rather than on statistics.

− A clearly identified locus of responsibility was created for the operation. In Boston there had previously been a high level of innovative practice in response to the youth violence problem, from dedicated and hard working staff. Nevertheless, the overall impact of these efforts had been less than expected because they had lacked co-ordination. Nobody was actually in charge of thinking about the problem and co-ordinating the individuals and agencies doing the work. The practitioner working group provided the focus required to apply the problem solving approach and drive forward results.

− Community and voluntary sector involvement built on existing
networks like the 10 point coalition of faith groups, rather than creating new ones

2 Name of intervention

Civil Gang Injunctions

Grogger, 2002

Nature of programme

Injunctions are civil actions that prohibit named individuals from engaging in specific activities within a clearly defined area. The prohibited actions can be illegal (e.g. drug selling) or otherwise legal (e.g. associating with other named gang members). Injunctions generally remain in effect indefinitely.

Prosecutors use evidence and intelligence gathered from the community and the police in support of their injunction applications. This information is actually served to the defendant when the case is filed.

If an injunction is broken, prosecutors can pursue it in a civil or criminal court.

The injunction strategy incorporates other law enforcement interventions, including place-based or hotspot enforcement strategies, community policing and interagency co-operation.

Theory of change

The theory is that injunctions deter gang violence. This could happen in three possible ways:

(i) Deterrence could be the result of the increased level of enforcement that an injunction entails. This is a view supported by Clarke’s (1997) theory of removing excuses for crime by “rule setting”.

(ii) Alternatively, because the defendant is served with the evidence collected around his activities, they realise that they are being closely monitored thereby “raising the gang member’s perceived probability of apprehension.” (Grogger, 2002:73) This is supported through Clarke’s (1997) theory around increasing perceived risks.

(iii) As the civil procedure allowed less stringent penalties for breach of the injunctions, the theory of change may also incorporate Beccaria’s stance that "crimes are more effectually prevented by the certainty than the severity of punishment" (Beccaria, 1819:93).
### Study methodology
‘Intuitive’ and Statistical Matching, comparing targeted reporting districts to neighbouring districts and districts with similar crime levels.

### Main research findings
In the year after they are first imposed injunctions lead the level of violent crime to decrease by 5-10%.

### Critical mechanisms
- It is difficult to untangle the critical mechanisms for this intervention. It may be the increased enforcement activity of the injunction or the revelation of intelligence or both working together (Grogger, 2002:74).

- The injunctions seek relief from the behaviour that it identifies - e.g. drug dealing, carrying a mobile phone, rather than prohibiting an affiliation - gang membership.

### 3 Name of intervention
**Peer Mentoring for Violence Prevention**  
Sheehan et al, 1999

### Nature of intervention
A peer mentoring programme was developed as part of the established community-based Cabrini Green Youth Programme (Chicago, USA).

In the programme 50 ‘mentees’ aged 7 to 13 were mentored by 19 ‘community adolescents’ aged 14 to 21 who designed, developed and delivered a 12-lesson, 18-month long curriculum for the younger group where information was provided through role play, games and rap music.

### Theory of change
Early intervention focusing in part on educating young children has been recommended as a key component in violence prevention (Dowd, 1998, Rivara & Farrington, 1995). The notion of peer mentoring is based on the observation that the behaviours of children are learned from adults and peers. These learning relationships can promote prosocial behaviours. Studies in the public health arena have suggested that peer mentoring contributes to successful health promotion.

This study hypothesized that “community based peer mentoring programmes can be a useful component of programmes that seek to prevent violence, serving to ameliorate the social risk factors that promote violence” (Sheehan et al, 1999:50).
Study methodology  
Matched cohort design. Treatment and control groups were matched on age, sex and census tract.

Main research findings  
Statistically significant differences between the experimental and control group in terms of their support for violence and behaviour problem scores. The intervention was cost effective.

Critical mechanisms  
- Aims to decrease the incidence of violence by improving youth coping skills through the use of community mentors who model positive behaviour.
- Targeted behaviour rather than affiliation. Looked to change attitudes to violence and aggressive behaviour in general.

Methodologically average studies

4  Name of intervention  
Operation Ceasefire: The Hollenbeck Initiative  
Tita et al, 2003

Nature of intervention  
The intervention expected to use the basic procedures of the Boston Project (Kennedy et al 2001), particularly leadership by a working group that brought together community leaders.

Theory of change  
Sought to replicate the Operation Ceasefire: Boston Initiative in LA, to develop, test and evaluate strategies for reducing gun violence among youth in a different setting.

Study methodology  
Non-randomised area based comparisons across three time periods. Some matching on key characteristics e.g. crime and poverty rates.

Main research findings  
Statistically significant differences between the experimental and control areas for:
- gang crime
- violent crime
- gun crime

Critical mechanisms  
- Effective problem analysis was used during the intervention. It identified both problems and potential interventions and led a working group (like the one in Boston) to implement a well designed and collaborative intervention.
- It succeeded in getting decentralised criminal justice organisations to focus resources on a problem in a single area.
The working group provided a regular opportunity for individuals to exchange ideas and to focus attention on a discrete and manageable problem.

Community support for the intervention was high, largely due to the inclusion of community representatives in the working group process.

Tailoring the intervention against an activity, such as gun violence, rather than affiliation, such as gang membership, helped make it possible for the community to support the intervention.

Community support helped in enlisting and securing a range of resources.

Analysis allowed individuals or groups to be targeted and prioritised for interventions.

Faith and voluntary groups were active in providing opportunities to move away from gang violence.

The operation pursued a policy that balanced “carrots and “sticks”, or prevention and social intervention programmes with law enforcement responses. The goal was to increase the cost of violent behaviour while increasing the benefits of non-violent behaviour.

5 Name of intervention Inter-Organisational and Community Approach to the Youth Gang Problem (The Little Village Approach) Spergel et al, 1997

Nature of programme Teams of community youth workers (including former gang members), probation officers, tactical police officers and a community organisation simultaneously targeted gang youths in a co-ordinated and collaborative fashion through information sharing and case management.

The intervention was based on a theoretical framework consistent with social work values involving social intervention/outreach, social opportunities provision, social control and gang suppression within a framework of community activism.
| Theory of change | There was a lack of evidence that any ‘single agency, community group, discipline, or approach alone is sufficient to successfully address a complex problem such as gang crime.’ (Spergel and Grossman 1997:469). Therefore, the theory of change was that co-ordination should be a key part of a framework for delivery. The programme was an innovative inter-organisational and community-based approach to youth gang problems. |
| Study methodology | One experimental and two control groups. Non-randomised with some matching on age, gang affiliation, criminal history. Also non-randomised quasi-experimental comparisons with similar areas in Chicago. |
| Main research findings | Young people on the programme experienced a significant relative reduction in both arrests for gang crime and self-reported criminal activity relative to the young people in the control group. |
| Critical mechanisms | − The integration and co-ordination of workers on the ground led to the development of a high degree of cohesion and consistency of both objectives and operations among the agencies involved.  
− The project workers were very visible to each other in the community and this contributed to high levels of accountability and performance. In turn this contributed to high staff morale.  
− Timely information sharing on a formal and informal basis was key. Organised networking took place through regular meetings and case management; in addition there was almost daily communication through beepers and agency radios.  
− The workers had a deep commitment to the project’s goals and objectives.  
− Some of the community youth workers were former gang members and closely identified with the aspirations and interests of the gang youths. This helped them to maintain respect and credibility with gangs whilst attempting to provide positive influences for them.  
− The integration of research and programme operations enabled regular dissemination of relevant findings and analysis, useful to the operational side for targeting the programme. |
Methodologically weak studies

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| 6 | Gang Resistance Education and Training (G.R.E.A.T) Ebensen, 1997 | Uniformed police officers teach a school-based nine-week gang prevention strategy curriculum to middle school students. The curriculum calls for the teaching officers to discuss gangs and how they affect the quality of people’s lives. | The programme is aimed at reducing impulsive behaviour, improving communication with parents and other adults, enhancing self-esteem, and encouraging students to make better choices, which was hoped would lead to reduced adolescent involvement in criminal behaviour and gangs. | Cross sectional survey with a treatment and control group, matched by sex, race, age, family status and parental education. | One year after completing the GREAT lessons, students in the experimental group reported:  
- more prosocial behaviour and attitudes than the control group  
- lower rates of self reported delinquency and gang membership |  
- Training is provided to police officers who teach GREAT. This training is effective in helping to prepare officers to become successful classrooms instructors.  
- Trained law enforcement personnel were successfully utilised as prevention agents.  
- Each of the nine lessons has a detailed plan, clearly stating its purpose and objectives. |
Discussion

This REA has been undertaken in order to collate available evidence on what is effective in preventing or reducing young people’s involvement in gang and gun related activity. A scientific assessment of evaluated studies was completed through which six studies demonstrating effective interventions were identified. The interventions were all based in the USA using some sort of quasi-experimental designs and were either multi-modal strategies, civil injunctions, peer mentoring or school based learning.

A number of key themes can be identified within these studies and these are discussed below.

Problem Solving

The use of established problem-solving techniques is critical to the development and implementation of any gang violence reduction work. The broader multi-modal strategic interventions (Operation Ceasefire Boston, Operation Ceasefire Hollenbeck and Little Village) ran in three localities in the USA: Chicago, Boston and Los Angeles. Challenges in transferring an initiative from one location to another were highlighted because the nature of the gun and gang problem was significantly different in each area. Also, the legal context of contrasting gun control in the U.S. and in Britain makes the transferability of findings hazardous without careful contextual considerations. Thorough research of the problem must be undertaken before an intervention is implemented to overcome any transferability issues and target interventions effectively. Routine problem solving can facilitate an intervention that is responsive to changing circumstances.

Clear Management and Leadership

The importance of creating a clear focus of responsibility – be it a person, an agency, or an interagency group – for the problem in question is supported by the multi-modal strategies (Kennedy, 2001). Someone needs to be in charge of thinking about the problem and co-ordinating the various individuals and agencies actually doing the work. How such responsibility is established and structured (e.g. an individual, a lead agency or as in Boston an interagency group) will depend on the area, its problems, and its current structures. However, adopting strong management and clear leadership is an important element in applying the problem solving approach.
Partnership Working

"No single agency, community group, discipline, or approach alone is sufficient to successfully address a complex problem such as gang crime." (Spergel & Grossman 1997:469). Each organisation has unique resources that, when pooled with those of others, can be more effective in reducing violence than it could have been on its own. A cross-disciplinary, community-based effort to control and prevent gang violence is encouraged.

Target Behaviours rather than Affiliation

Effective interventions targeted behaviour (gang violence) rather than affiliation (gang membership). Peer mentoring and civil gang injunctions both supported the view that the important target for gang violence reduction work was the problematic behaviour and not gang affiliation itself. Tailoring an intervention against behaviour rather than affiliation helped make it possible for the community to support the intervention where gang membership was an integral component of community life (Tita et al, 2003).

Opportunities and Enforcement

Multi-modal strategies used the community groups to help pursue a policy that balanced ‘carrots’ through social intervention programmes with ‘sticks’ through law enforcement responses. The aim was to increase the cost of violent behaviour to gang members whilst increasing the benefits of non-violent behaviour.

Focus on Incidence and Lethality

Operation Ceasefire in Boston focused both on reducing the number of gun assault incidents and the number of homicide victims. Whilst society and community problems contribute to the incidence of violence, other factors such as the easy availability of firearms contribute to the lethality of violence. Sheehan et al (1999:53) state that “simultaneous efforts in decreasing the incidence and the lethality of violence [can] be expected to have the greatest effect”.

Information Exchange

Effective interventions encouraged the growth of successful networks between front line staff, enabling the development of collaborative approaches and the sharing of information. Front line staff sought information that would contribute to achieving the intervention's aim and then shared such information with each other both formally and informally.
“While a single probation officer, no matter how dedicated, may not have much effect in reducing crime, that officer’s ability to use information from other agencies in a timely manner could multiply whatever effect the officer might have”

(Tita et al, 2003:47)

Community Groups

When engaging the community or voluntary groups, existing networks should be used rather than establishing new ones.

Having a community structure for information and support was vital to the acceptance of any gun violence strategy. The community and voluntary groups can provide a useful mechanism for communicating directly with gang members and providing routes out of gang violence.

Effective Marketing

Effective social marketing of gang violence reduction work is an essential part of any strategy. Marketing was a core element of the multi-model strategies identified in the studies. Messages need to be clear, unambiguous, vivid, salient and emotionally engaging to the target population. It is essential that the enforcement elements of any intervention are implemented consistently and as advertised.

Working with young people

Direct work with young people should follow on from effective problem analysis and information exchange between agencies. In some areas work was undertaken with violent or otherwise high-risk individuals, specific gangs, specific behaviours, whole school years, specific localities and housing projects. It is likely that an effective strategy would include a mixture of the most appropriate components. Interventions should be delivered over time, rather than as one-offs. Petrosino et al (2004) specifically counsel against one-off, fear arousal interventions delivered by uniformed authority figures such as ‘Scared Straight’.

Additional Benefits

When an intervention is implemented, there can be unanticipated as well as anticipated outcomes. These can be both positive and negative, making monitoring and evaluation key to any intervention.

Added benefits were identified in some of the studies included in the REA. For example, peer mentors developed leadership abilities, became more self
confident and learned skills that they could use for future employment and the mentees displayed increased self-esteem.

Limitations of the REA

REAs do have some limitations, which are discussed below.

First, as the REA only searched published studies it may be subject to some publication bias. Publication bias is a consequence of studies with a positive outcome being more likely to be published. Undertaking a full systematic review, which would include the searching of ‘grey’ literature, would help address this limitation.

Second, in order to provide timely information to influence AHOG’s work, a cut-off date was required for the receipt of the study papers. It was not possible to include any requested studies that were received after this date. This REA will be updated in December 2004 thereby allowing any papers received after the deadline to be considered. This limitation could also be removed by undertaking a full systematic review.

Finally, any systematic review or REA can only report on interventions where a full evaluation has taken place using an experimental or quasi-experimental design. This is because, as previously mentioned, many argue that only studies with a robust comparison group can provide strong evidence of the counterfactual situation and, hence, causality and hence net effectiveness (Sherman, 1997). As a result, other interventions may exist that are effective in preventing or reducing gang and gun related activity. Just because a programme has not been evaluated properly does not mean it is failing to achieve its goals, but without methodologically robust evaluation of these interventions we cannot be sure.

The six studies identified in this REA are categorised as ‘methodologically strong’, ‘methodologically average’ or methodologically weak’. These scientific methods scores reflect only the strength of evidence about programme effects on crime, and not the strengths of the effects themselves (Sherman, 1997).

Despite the limitations, this REA currently provides the best evidence available in the time period required to meaningfully inform policy and practice for AHOG on what works in preventing or reducing young people’s involvement in gang and gun related activity.
Future Implications

Developing the Evidence Base

Gang violence reduction work in the UK should add to the available evidence by demonstrating effectiveness through outcomes. This may involve setting up experimental or quasi-experimental evaluations of interventions. At the very minimum, any intervention funded should be required to monitor its work.

Most evaluations focus on how much crime actually decreases. Very few of the studies identified by the REA included any information on cost effectiveness. Calculating the true costs of an intervention is necessary for determining whether it warrants replication or continuation (Tita et al, 2003). The fact that a programme is effective may be irrelevant if the financial or social costs are too high.

Developing the REA

It is hoped that this REA can be used as an interim systematic review and could be developed into a full systematic review with additional time and resources. This would involve a search of ‘grey’ (unpublished) literature to compensate for publication bias, hand searching of journals and other texts, and an independent researcher searching the same databases with the same terms. By undertaking a full systematic review some of the limitations in this REA could be overcome.

It is important as part of any REA or systematic review that this exercise is repeated in the future so that new evidence can added thus developing a sound body of evidence for this particular issue.

Establishing a Research Sub-Group

Research should inform the future direction of AHOG. It is important to ensure that a research culture is established and maintained. The development of a sub-group is a critical mechanism through which research and assessment processes could be managed.

Performance Assessment Framework

The results of this (and any subsequent) REA should drive the development of future activities by AHOG. As a result, it is critical that the performance assessment framework reflects the findings of the REA. This will ensure that performance is monitored on an ongoing basis in relation to those areas proven to have most impact on the problem.
Policy Maker and Practitioner Responses to REAs

This REA was commissioned by AHOG in order to provide an evidence base that will inform and guide their future activity. The use of REAs is developing and as a result, it is key that the impact of this type of research on policy and practice is monitored. It will be important to consider the AHOG’s response to this REA both in terms of its value as a source of information and the way in which the AHOG use it to guide their strategic direction and practice.

Recommendations

This REA highlighted a number of main findings. It found that effective programmes:

1. Adopt a problem-solving approach and analyse the local problem rather than simply importing an intervention

2. Have a strong management structure with clear leadership of the intervention

3. Support partnership working by adopting a collaborative approach among front line staff

4. Target behaviour (gang violence) rather than affiliation (gang membership). This applies to all interventions, whether strategic or tactical

5. Offer both a ‘carrot’ by providing opportunities out of gang activity through employment, training, treatment and family support, and a ‘stick’ through enforcement, prohibitions and sanctions

6. Focus both on reducing incidence and reducing lethality

7. Exchange information both formally and informally

8. Engage community groups and voluntary groups via existing networks

9. Market effectively. Once a strategy is agreed it should be marketed to the target audience and the wider community. The enforcement elements of the strategy should be implemented consistently and as advertised
References

Studies Included in the Rapid Evidence Assessment


Other References


### Appendix I - Intervention Summary Table

<table>
<thead>
<tr>
<th>Study</th>
<th>Intervention tested</th>
<th>Purpose of the study</th>
<th>Study methodology</th>
<th>Number of participants</th>
<th>Main findings</th>
<th>Summary of conclusion/discussion</th>
<th>Maryland ranking</th>
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<tbody>
<tr>
<td>Kennedy, D. Braga, A. Piehl, A. and Waring, E. 2001 Reducing Gun Violence. The Boston Gun Project's Operation Ceasefire</td>
<td><strong>Operation Ceasefire: The Boston Initiative</strong> A partnership approach between academics and practitioners based on problem oriented policing. An interagency working group was assembled and applied research techniques to assess the nature of and dynamics driving youth violence in Boston. An intervention was developed to have an impact on youth homicide in Boston, and subsequently implemented, adapted and evaluated. &lt;br&gt; The initiative had the following main elements: &lt;br&gt; − A direct law enforcement attack on illicit firearms traffickers supplying guns. &lt;br&gt; − An attempt to generate a strong deterrent to gang violence. The &quot;pulling levers&quot; strategy. This</td>
<td>The evaluation focused on the following key questions: &lt;br&gt; − Were significant reductions in youth homicide and other indicators of serious nonfatal gun violence associated with the implementation of Operation Ceasefire? &lt;br&gt; − Did the timing of these reductions coincide with the implementation of Operation Ceasefire? &lt;br&gt; − Were other factors responsible for Boston's reduction in youth homicide?</td>
<td>There were no control areas or control gangs within the city as the operation was aimed at the whole city. Analysis of impacts within Boston followed a basic one-group, time-series design. To allow for underlying trends, seasonal variations and random fluctuations, rigorous time series models were used to analyse the data. Poisson regression generalised linear models were used.</td>
<td>Population of Boston</td>
<td>The &quot;within Boston&quot; analysis showed: &lt;br&gt; − 63% reduction in the monthly number of youth homicide victims in Boston. &lt;br&gt; − 32% decrease in the monthly number of citywide shots-fired calls. &lt;br&gt; − 25% decrease in the monthly number of citywide all-age gun assault incidents. &lt;br&gt; Evaluating the trafficking (supply side) aspect of Ceasefire was essentially impossible for the evaluators. It was</td>
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<td>involved targeting gangs involved in violent behaviour and reaching out directly to their members with a message that violence would not be tolerated. This message was backed by &quot;pulling every lever&quot; legally available (sanctions/ law enforcement actions) when violence occurred. − At the same time the &quot;Street Workers&quot; (social services, parole, probation, churches and community groups) offered other types of assistance and opportunities for those gang members willing to take advantage of them. Ceasefire had 4 main levels of intervention open to it: − <strong>Level one</strong> was a warning, through forums or other means to a particular group or groups to stop the violence.</td>
<td>level drug market activity. In addition a non-randomised quasi-experiment was used to compare youth homicide trends in Boston with those in other large cities in the US. The researchers built a model that maximised their ability to control for trends, seasonal variation and random fluctuations on each city. A generalised linear Poisson regression model that predicted monthly youth homicide counts as a function of simple linear trends, nonlinear trends, monthly effects, intervention effects and a simple autoregressive component, was used for each city time series.</td>
<td>felt though that the change that had occurred was not in the extent of gun ownership but in gun use. The principal impact was almost certainly a demand side deterrence based effect rather than a supply side effect. Analysis comparing trends in Boston with other cities suggests that Boston’s significant youth homicide reduction associated with Operation Ceasefire was distinct when compared with youth homicide trends in most major U.S. and New England cities.</td>
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<td><strong>Level two</strong> was a near-term street enforcement focused on a group or groups deliverable largely within the capabilities of the police but with some help from other agencies.</td>
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<td><strong>Level three</strong> was a large interagency heavily coordinated operation that was readily apparent to the target group with sanctions primarily falling to the state.</td>
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<td><strong>Level four</strong> was for those groups that were both violent and deemed unsalvageable. Undercover investigations making heavy use of federal sanctions designed to permanently dismantle the group.</td>
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<td>Throughout the operation the Ceasefire message was marketed very strongly through meeting, individual contacts and outreach workers. Gang members were</td>
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Grogger, J.  2002
The Effects of Civil Gang Injunctions on Reported Violent Crime: Evidence From Los Angeles County

**Civil Gang Injunctions**  
Injunctions are civil actions that prohibit named individuals from engaging in specific activities within a clearly defined area. Civil actions result in less stringent penalties, but can impose those penalties without due criminal process. Prohibited actions can be illegal (e.g. drug selling) or otherwise legal (e.g. associating with other named gang members).

The injunction strategy incorporates other law enforcement interventions, including place-based or hotspot enforcement strategies, community policing and interagency co-operation.

The author suggests the

- **Purpose of the study**
  The primary research question is:
  - Do the injunctions reduce reported violent crime in the target areas?
  - It also considers:
    - Do the injunctions cause spillovers? (displacement)

- **Study methodology**
  Comparison of target reporting districts with two types of comparison sample, intuitive and statistical:
  1. Neighbouring reporting districts. Here it is assumed that geographic proximity will result in similar area characteristics.
  2. Statistical matching procedure. For each target area a comparison area is constructed from reporting districts whose crime levels are similar to the target area.

- **Number of participants**
  Full population in the 14 target areas and the identified control areas

- **Main findings**
  The analysis indicated that in the first year after the injunctions are imposed they lead to the level of violent crime to decrease by 5-10%
  Spillover was not found

- **Summary of conclusion/discussion**
  It is difficult to determine whether the effects of the injunction are the result of increased enforcement or the revelation to gang members of the increased surveillance that imposing it entails. Because the estimates are based on a small sample, they should not be regarded as presenting conclusive evidence of the long-term effects of injunctions.

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<td>Grogger, J.  2002</td>
<td>Civil Gang Injunctions</td>
<td>Essentially told “here’s how its going to be, after this its up to you”. The problem solving approach identified a network of gang conflicts within the city and this was used to target the operation.</td>
<td>Comparison of target reporting districts with two types of comparison sample, intuitive and statistical: Neighbouring reporting districts. Here it is assumed that geographic proximity will result in similar area characteristics. Statistical matching procedure. For each target area a comparison area is constructed from reporting districts whose crime levels are similar to the target area.</td>
<td>Full population in the 14 target areas and the identified control areas</td>
<td>The analysis indicated that in the first year after the injunctions are imposed they lead to the level of violent crime to decrease by 5-10% Spillover was not found</td>
<td>It is difficult to determine whether the effects of the injunction are the result of increased enforcement or the revelation to gang members of the increased surveillance that imposing it entails. Because the estimates are based on a small sample, they should not be regarded as presenting conclusive evidence of the long-term effects of injunctions.</td>
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<td>Sheehan, K., DiCara, J., LeBailley, S. and Christoffel, K. 1999 Adapting the Gang Model: Peer Mentoring for Violence</td>
<td>Peer Mentoring for Violence Prevention 18 month intervention in which 19 community adolescents (aged 14-21) mentored 50 children (aged 7-13) by designing and presenting 12 violence prevention lessons.</td>
<td>To assess the effectiveness of an inner-city peer mentoring programme in decreasing violence-endorsing attitudes and aggressive behaviour in elementary school-aged children. Hypothesis:</td>
<td>Effects of the injunctions estimated by using the difference in difference approach, contrasting the mean change in the level of crime within the target areas, before and after the injunction is imposed, to the corresponding change in the level of crime within the comparison area.</td>
<td>50 children enrolled on peer mentoring. 75 control subjects</td>
<td>At baseline the survey scores of the treatment and control groups were not different. After the intervention period the treatment group scores indicated statistically</td>
<td>Peer mentoring for younger children may be an important component of efforts to reduce youth violence. A larger multi-site trial is warranted.</td>
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Evidence Based Approaches to Reducing Gang Violence
AHOG Paper July 2004
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<td><strong>Prevention</strong></td>
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<td>Community based peer mentoring can be a useful component of programmes that seek to prevent violence, serving to ameliorate the social risk factors that promote violence. The study also examined the impact of the intervention on the mentors, however this was not included in this REA as there was no control group for this aspect of the evaluation.</td>
<td>measure attitudinal change, these were: “Determining Our Viewpoints of Violent Events” (DOVVE Survey) and “Normative Beliefs About Aggression Scale” (NOBAGS Survey) The surveys were administered at baseline, 9 months (mid-study) and 18 months (end of study). To assess behavioural change, children were evaluated by their teachers using the “Revised Behaviour Problem Checklist” (RBPC). Teachers were blinded to treatment and control status.</td>
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<td>significant less support for violence than the control group scores. (DOVVE Survey: p&lt;0.006; NOBAGS Survey: p&lt;0.001) Treatment group scores for behaviour were comparable at baseline between case and control subjects, but there was a statistically significant difference between the scores of the two groups after the intervention (p&lt;0.0001), as the control group scores for behaviour worsened. The intervention was very cost effective. The approximate cost for the 19 adolescents to work with 50 children for 48 weeks</td>
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<td>Tita, G. Riley, K. Ridgeway, G. Grammich, C. Abrahamse, A. and Greenwood, P. 2003 Reducing Gun Violence. Results from an Intervention in East Los Angeles</td>
<td><strong>Operation Ceasefire: The Hollenbeck Initiative</strong>  The working group for the project pursued a policy based on &quot;sticks&quot; as well as &quot;carrots&quot;, or law enforcement with prevention and social interventions. The goal was to increase the cost of violent behaviour to the gang members whilst increasing the benefits of non-violent behaviour. The intervention was based on the Boston model of &quot;collective accountability&quot; - seeking to hold all members of a gang accountable for the act of any individual member. Primary points of leverage for holding other gang members accountable after an</td>
<td>Research sought to assess whether the intervention helped to reduce:  − violent crime: homicides, attempted homicides, robberies, assaults and kidnappings.  − gang crime: violent crime and terrorist threats, firearms discharge, vandalism and graffiti committed by gang members.  − gun crime: any of the above crimes that involved the use of a firearm.</td>
<td>The analysis compared changes in crime for 3 periods across 3 comparison areas.  The 3 periods of comparison were:  − The 6 months prior to the intervention. The pre-intervention period.  − The 4 months in which all parts of the intervention were applied. The suppression period.  − The 2 months in which only selected parts of the intervention were applied. The deterrence period.</td>
<td>Population data from Police reporting districts not available – used crime counts rather than crime rates.</td>
<td>Gang crime, violent crime, and gun crime decreased significantly in the intervention areas compared to control areas. Crime decreased in surrounding areas as well. Comparing the overall target area to the remainder of the 15 square mile LAPD area in which the target area was situated: Gang crime (p&lt;0.05) decreased significantly during the suppression period. Violent crime (p&lt;0.05), gang crime (p&lt;0.01)</td>
<td>The complexity of the intervention and the fact certain elements of the intervention could not be conducted as originally planned makes interpretation problematic, but there is clear evidence that aspects of this intervention are highly effective.</td>
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<td>individual committed a violent act included:</td>
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<td>areas for the target area were:</td>
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<td>and gun crime (p&lt;0.05) decreased significantly during the deterrence period.</td>
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<td>− Stringent enforcement of parole and probation conditions and serving of outstanding warrants.</td>
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<td>− The remainder of the 15 square mile Los Angeles Police Department (LAPD) area in which the target area was situated.</td>
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<td>Comparing the 5 targeted police reporting districts to the remainder of the target area where only select portions of the intervention were carried out:</td>
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<td>− Increased LAPD patrols in gang territory.</td>
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<td>− The 5 police reporting districts in which the all elements of the intervention were targeted compared with the remainder of the target area where only select portions of the intervention were targeted.</td>
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<td>Violent crime decreased significantly in the suppression (p&lt;0.05) and the deterrence (p&lt;0.05) periods. Gang crime decreased significantly (p&lt;0.05) in the suppression period.</td>
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<td>− Stringent enforcement of public housing residency requirements.</td>
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<td>− The census block groups comprising the turf of the targeted gangs (target area) compared with a group of census blocks matched on key characteristics (such as crime and poverty rates) situated</td>
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<td>Comparing the Census block groups overlapping the targeted reporting districts to the matched Census blocks:</td>
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<td>− Referral of gun law violations to federal prosecutors.</td>
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<td>Secondary points of leverage designed to quell gang violence in the wake of any gang attack upon another included:</td>
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<td>− Increased LAPD patrols in the immediate geographic vicinity of an incident.</td>
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<td>− Deployment of officers from specialised police units to the broader area.</td>
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<td>− Additional police patrols in public parks.</td>
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| − Installation of traffic barriers and other physical features to improve quality of life.  
− Stringent enforcement of vehicle and housing codes.  
− Collection of support payments for gang members with children.  
− Enforcement of truancy laws for under age gang members.  
Prevention and intervention programmes offered included:  
− Job training and development.  
− Tattoo removal.  
− Substance abuse treatment programmes.  
Considerable "retailing the message" was undertaken which spread news about the pending implementation of the operation, the consequences of violent behaviour and the availability of services and opportunities. | throughout the wider LAPD area. | | | | Violent crime decreased significantly (p<0.05) in the suppression period.  
All other changes failed to reach statistical significance. The lack of statistical significance for some crime types in the smaller areas is imputed to smaller sample size. | | |
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<td>Spergel, I and Grossman, S. 1997</td>
<td><strong>Inter-organisational and community approach to the youth gang problem</strong> Team of community youth workers (many are former gang members), probation officers, tactical police officers and a community organisation simultaneously targeted gang youths in a collaborative fashion. Their strategies involved social intervention, social opportunities provision, social control and gang suppression within a framework of community</td>
<td>The aim was the absolute or relative reduction of serious violence among gang youths served by the project in the area, compared to other similar youths not served or not contacted by the project in the area.</td>
<td>Two control groups selected to compare to targeted youths: (a) nontargeted gang youths receiving some services but not receiving co-ordinated intensive service or contacts; (b) nontargeted or nonserved contacted youths from the same gangs who were arrested for the same incidents in the first program year (also controlled for age, gang affiliation, prior</td>
<td>Approx. 200 young people were targeted over the 4-year project. This study reports on 125 young people targeted over 3 years.</td>
<td>Relative reduction in gang crime in targeted group compared to 2 control groups according to both police arrest data and self-reported crime data. Official police arrest data: At baseline, targeted youths had average numbers of arrests for total crime (p&lt;0.01) and violent crime</td>
<td>Some very positive findings, but relatively small sample size (though reduction in gang crime was statistically significant) and some minor methodological concerns. Risk of bias due to integration of research and demonstration. Community youth workers were</td>
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<td>Study (authors/date)</td>
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<td>Purpose of the study</td>
<td>Study methodology</td>
<td>Number of participants</td>
<td>Main findings</td>
<td>Summary of conclusion/discussion</td>
<td>Maryland ranking</td>
<td>QAT score</td>
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</table>
|                      | activism.            | Hard-core gang youths are targeted; particularly those in middle to late teenage years or early 20s. | criminal history).  
Police, court and detention data for target and comparison areas.  
Project worker’s tracking data.  
Community survey of 200 residents and 100 local community organisations on the nature and scope of the gang problem in the target area and the comparison area were conducted at two time periods.  
Interviews conducted with 194 young people entering the programme. | at levels more than twice that of non-targeted youths. Program youths experienced a relative reduction in arrests for gang crime, especially gang violence, relative to control youths, so that at third project year differences between targeted and non-targeted youths were non-significant. The average number of arrests for all crime more than halved (p<0.01) for targeted youths during the intervention period. However, the average number of drug-related arrests increased relatively for targeted youths, though not significantly.  
Self-reported crime: Targeted youths reported essential to the evaluators in locating targeted youths for yearly research interviews, but there is no discussion of the possibility of attrition bias.  
The key objective of the project was to target the most violent and criminal youths in the gangs, but they cannot be considered directly comparable to the control groups, because the possibility of ‘mean reversion’ remains. With no way of excluding mean reversion, it is possible that those initially selected to be targeted for the intervention are selected at a time of higher offending than average, and thus that their impressive reduction in offending rates may have happened naturally anyway. | Maryland ranking | QAT score |
<table>
<thead>
<tr>
<th>Study (authors/date)</th>
<th>Intervention tested</th>
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<tbody>
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<td>total and violent crime more than twice that of non-targeted youths at baseline (p&lt;0.05), but difference between case and control studies became insignificant at third program year, due to an almost seven-fold reduction (p&lt;0.001) in total crimes and an almost six-fold reduction (p&lt;0.01) in violent crimes. Improvement in school and job attainment from baseline to 3-year follow-up for targeted youth. Little Village as a whole had the lowest increase in gang violence compared to six similar areas in Chicago. Little Village also experienced a statistically significant (as a reversion to their average levels of offending) even without the intervention.</td>
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<tr>
<td>Study (authors/date)</td>
<td>Intervention tested</td>
<td>Purpose of the study</td>
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</tbody>
</table>
| Ebensen, F-A. Osgood, D. 1997 National Evaluation of GREAT | **Gang Resistance Education and Training (GREAT)** Uniformed police officers teach a school-based nine-week gang prevention strategy curriculum to middle school students. | The questionnaire was designed to assess the GREAT curriculum, specific measures assessed through the questionnaire included:  
- Cognitive aspects  
- Gang membership  
- Self reports of illegal activity | The early findings are based on the national evaluation's cross-sectional survey of 5935 eighth graders from 42 schools in 11 locations where GREAT is taught.  
The questionnaire was administered 1 year after students had completed the programme.  
The questionnaire looked at 5 2629 in treatment group and 3207 in the comparison group. (99 students did not respond to the relevant question). | Preliminary results indicate that 1 year after completing the GREAT lessons students reported:  
- More prosocial behaviours and attitudes than comparison students.  
- Lower rates of self-reported delinquency | Initial findings indicate the programme is having a positive effect on student attitudes and behaviours and is deterring them from crime. | 3 | 11 |
<table>
<thead>
<tr>
<th>Study (authors/date)</th>
<th>Intervention tested</th>
<th>Purpose of the study</th>
<th>Study methodology</th>
<th>Number of participants</th>
<th>Main findings</th>
<th>Summary of conclusion/discussion</th>
<th>Maryland ranking</th>
<th>QAT score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>background characteristics to determine whether significant difference existed between students completing GREAT and students in the comparison group. These were sex, race, age, family status and parental education. Differences between the treatment and control groups were small and most were controlled for statistically. A quasi-experimental design such as that being implemented in the longitudinal phase of the national evaluation will provide a better assessment of programme effectiveness and long-term effects. There was variation among the schools in the numbers of students completing and not completing GREAT. Therefore, analysis of the treatment and control</td>
<td>and gang-membership than comparison students. More negative attitudes about gangs than comparison students. More communication and attachment with parents than comparison students. Greater commitment to school and lower levels of perceived obstacles to academic achievement than comparison students.</td>
<td></td>
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</tr>
<tr>
<td>Evidence Based Approaches to Reducing Gang Violence</td>
<td>AHOG Paper July 2004</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Study (authors/date)</td>
<td>Intervention tested</td>
<td>Purpose of the study</td>
<td>Study methodology</td>
<td>Number of participants</td>
<td>Main findings</td>
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<td>groups was replicated in a restricted sample of 28 schools in which at least 15 students comprised each group. Restricting the analysis to the 28 schools tends to strengthen the magnitude of the programme's effect.</td>
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</tbody>
</table>
Appendix II - Search Criteria

Government Office for the West Midlands (GOWM) commissioned the ESRC UK Centre for Evidence Based Policy and Practice to carry out literature searches on a number of United Kingdom and United States databases, using the facilities at the British Library. These searches were conducted on 17th March 2004.

GOWM provided the search terms listed below:

Effective*, outcome, impact, result, evaluation, intervention, mediation, mentoring, gang*, gun*, shootings, firearms, violence, gang violence, weapons, woundings, street gangs, prison gangs, homicide, juveniles, juv*, violen*, gang database, prevention, prevent*, early identification, pre-crime

GOWM also suggested a number of databases to be searched. These were:

NCJRS
ASSIA
Campbell Collaboration, Criminal Justice Abstracts
Medline
PsycINFO
SSCI
PAIS
British Library
ERIC
IBSS
Sociological Abstracts
Policy Hub Portal

Search Process

Search strategies were developed using the search terms suggested by GOWM and a number of additions were made to the list.

Two approaches were tried:

a) searches using the term ‘gang’ and variations of ‘juveniles’

b) searches using the above terms but with the addition of ‘intervention*’ and variations

Using (a) an estimate of the size of the generally relevant literature was obtained; using (b) a more specific set of references was obtained. However, it is likely that relevant material would be missed using (b) because of the generally poor quality of indexing in many social science databases.

The search strategies used were as follows:-
a) Gang* and (young people or juvenile* or teenage* or youth* or adolescen*) and (gun* or arm* or weapon* or firearm* or violen*)
b) Gang* and (young people or juvenile* or teenage* or youth* or adolescen*) and (gun* or arm* or weapon* or firearm* or violen*) and (intervention* or evaluat* or outcome* or impact* or result* or effect*)

Databases used:-

Criminal Justice Abstracts
ASSIA
Acompline
IBSS
Psychological Abstracts
Sociological Abstracts
PAIS
SIGLE
ERIC
Social Sciences - Full Text
Inside Web
Web of Knowledge
Urbaline
Planex

The period covered was from 1968 to March 2004 although all the databases vary in the year from which data is covered.
Appendix III - The Maryland Scale of Scientific Methods

The Maryland Scale of Scientific Methods (Sherman et al, 1997) was designed by a group of researchers in the University of Maryland for their review of "what works" in crime prevention.

It is a five-point scale used to classify the strength of scientific evidence, it does not classify the strength of a programme's or intervention's effect. Scientific evidence is important in terms of being able to infer cause and effect. Sherman and colleagues (1997) argue that only studies with a robust comparison group design provide can provide evidence of causality. This equates to level three and above in the Maryland Scale.

Details of the scale are set out below.

<table>
<thead>
<tr>
<th>Level One</th>
<th>Correlation between a crime prevention programme and a measure of crime or crime risk at a particular point in time.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level Two</td>
<td>Temporal sequence between the programme and the crime or risk outcome clearly observed, or the presence of a comparison group without demonstrated comparability to the treatment group.</td>
</tr>
<tr>
<td>Level Three</td>
<td>A comparison between two or more comparable units of analysis, one with and one without the programme.</td>
</tr>
<tr>
<td>Level Four</td>
<td>Comparison between multiple units with and without the programme, controlling for other factors or using comparison units that evidence only minor differences.</td>
</tr>
<tr>
<td>Level Five</td>
<td>Random assignment and analysis of comparable units to programme and comparison groups.</td>
</tr>
</tbody>
</table>
### Appendix IV - Quality Assessment Tool

<table>
<thead>
<tr>
<th>Quality indicator</th>
<th>Level of quality</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) size</td>
<td>Whole population or 100+ participants in both treatment and control groups</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>70% of population or 50-100 participants in both treatment and control groups</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Less than 50 participants in both treatment and control groups</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
<tr>
<td>b) method</td>
<td>Whole population or random samples</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Purposive samples with potential impact adequately controlled for statistically</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Purposive samples with potential impact not adequately controlled for statistically, or not controlled for at all</td>
<td>3</td>
</tr>
<tr>
<td>c) selection</td>
<td>Control and experimental groups comparable</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Control and experimental groups not comparable, but differences adequately controlled for statistically</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Control and experimental groups not comparable, and differences not adequately controlled for statistically, or not controlled for at all</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
<tr>
<td>2. Bias</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) response/refusal bias</td>
<td>No bias</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Some bias but adequately controlled for statistically</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Some bias and not adequately controlled for statistically, or not controlled for at all</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
<tr>
<td>b) attrition bias</td>
<td>No/very little (&lt; 10%) attrition</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Some attrition butt adequately controlled for statistically</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Some attrition and not adequately controlled for statistically, or not controlled for at all</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
<tr>
<td>c) performance bias</td>
<td>Control and exp. groups treated equally</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Control and exp. groups not treated equally – minor effect</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Control and exp. groups not treated equally – major effect</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
<tr>
<td>3. Data collection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) method</td>
<td>Very appropriate</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Appropriate</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not appropriate</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
<tr>
<td>b) timing</td>
<td>Very appropriate</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Appropriate</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not appropriate</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
<tr>
<td>c) validation</td>
<td>Very appropriate</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Appropriate</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not appropriate</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
<tr>
<td>4. Data analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) appropriate techniques/reporting</td>
<td>Very appropriate</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Appropriate</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Not appropriate</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Not reported</td>
<td>5</td>
</tr>
</tbody>
</table>
Guidance notes for completion of Quality Assessment Tool

If insufficient information is available to assess a particular criterion, mark that as 5. The first two criteria are relatively straightforward and self-explanatory. Further definitions are below:

1c) Sample selection
Were the experimental and control groups somehow selected differently, or were not comparable for some reason? For example, did the groups demonstrate very different patterns of offending prior to entering treatment and control groups? This score relates to the ‘recruitment’ phase only, i.e. before any treatment takes place or is even offered.

2a) Response/refusal bias
This score relates to any bias that may have been introduced once the samples had been selected. Two examples of potential response/refusal bias:

If a study relied on voluntary take-up of treatment/intervention once the treatment sample had been selected, were those that volunteered to participate comparable to all those chosen to participate in the treatment group? See Harrell & Roman (2001) for an example.

If a study relied on self-reported data among treatment and control groups (once those groups had been selected), were those in the treatment and control groups who completed the self-report questionnaire/interview comparable to the total populations of the treatment and control groups?

2b) Attrition bias
Were all the participants in the experimental and the control samples accounted for? Were there differences between the study participants (in both treatment and control groups) at the pre- and post-test stages? Were there more “lost-to-follow-ups” in one treatment group compared to the control group (or vice versa)? Is attrition evident but no adequate discussion found in the study, or is it discussed but not controlled for adequately?

2c) Performance bias
Were experimental and controls dealt with separately other than the intervention under inquiry? Could any other differences in the way in which the groups were treated have any major impact on the outcomes? For example, performance bias will exist where different drug testing regimes were in place for control and treatment groups, if the testing regime itself was not the intervention being investigated. Also, if appropriate, were the participants and interviewers blinded?

3a) Method of data collection
What data collection methods were employed, e.g. self-completion questionnaire, structured interview, analysis of administrative data (crime
records)? Were these appropriate in terms of supplying the required data to be able to answer the research question(s) posed?

Studies that rely on the retrospective collection of self-reported pre- and post-intervention data only should be given a maximum score of 2 (given likely recall issues). Studies relying on a single data collection method should be given a maximum score of 2.

**3b) Timing of data collection**

Was the timing of data collection from the control and comparison groups before and after the treatment appropriate? Was a sufficient length of time left after treatment when collecting recidivism data to adequately determine outcome in terms of reduced offending?

24+ month follow-ups should be rated as 1, 12-24 month follow-ups should be rated as 2 and under-12 month follow-ups should be rated as 3. Those studies where no baseline data are collected should be marked as 3.

For longitudinal studies, were the data collected at appropriate intervals? Was a rationale given for the timing of the data collection, and was it appropriate?

**3c) Validation of data**

If appropriate, were different sources of data used? Was any triangulation carried out? For example, was self-reported criminality matched to official records?

Studies relying on a single data source should be given a maximum score of 2. Studies that rely on a single measure of recidivism should be given a maximum score of 2.

**Data collection – general**

Where multiple methods are used, the reviewer must make a judgment regarding the overall standard of the data collection, concentrating on those data deemed most appropriate to answering the research questions.

**4a) Appropriate statistics and techniques used**

Were appropriate statistics used (e.g. Chi-square, t-test, ANOVA, regression) and reported? Were standard deviations reported as well as differences of means? Were lower and upper quartiles reported (or the range) as well as medians? Were confidence intervals reported as well as odds ratio? Were significance levels reported?

Were repeated measures reported, i.e. were baseline data and post-treatment data reported? If post treatment data only are reported, the maximum score given should be 2.

(Deaton, 2004)