

Interventions to Reduce Anti-social Behaviour and Crime

A Review of Effectiveness and
Costs

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Preface

This report presents the findings of a review of literature on the effectiveness and cost-benefit of interventions to reduce anti-social behaviour and crime. The National Audit Office (NAO) has begun research on a range of measures used by the Home Office to address the problem of anti-social behaviour, and this RAND Europe review was commissioned by the NAO to identify and synthesise research about interventions beyond recent Home Office measures such as Anti-social behaviour orders.

Anti-social behaviour is an increasingly key topic of public concern. According to Home Office statistics, around 66,000 reports of anti-social behaviour (ASB) are made to authorities each day.¹ Vandalism alone, one type of ASB, is estimated to cost victims and the Criminal Justice system around £1.3 billion a year (Social Exclusion Unit, 2000a). The main purpose of this study is to identify lessons from existing research on interventions to tackle anti-social behaviour and crime that could lead to improvements in the government's strategy. The study's key findings, discussed in detail in the report, are:

- There is no strong tradition of rigorous evaluations of interventions in Europe, but there are interesting initiatives in this direction, so data on the effectiveness of interventions rely heavily on research from the US.
- While coercive interventions, such as detention and imprisonment, have been found to produce nil or even negative effects in reducing recidivism, certain types of developmental/rehabilitative interventions can significantly reduce the rate of recidivism amongst young offenders
- There is very limited data on the cost-benefit ratios of different types of interventions; however, cost-benefit analyses conducted primarily in the US reveal that early childhood interventions and educational interventions for at-risk youth provide the best value for money.

This report will be of particular interest to the NAO and its relevant client government departments, such as the Home Office. It is also relevant for policy makers as well as a wider audience concerned with the challenge of designing and implementing effective and efficient interventions to tackle anti-social behaviour and crime.

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¹ Home Office website: <http://www.homeoffice.gov.uk/anti-social-behaviour/S>

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Executive Summary

Anti-social behaviour (ASB) is a costly and increasingly key topic of public concern in the UK. In response to this problem, the UK Government is introducing new legal instruments and policy initiatives to tackle ASB. These initiatives range from Anti-Social Behaviour Orders to cognitive behavioural programmes and parenting skills training for at-risk families. Despite growing interest in these measures, there is a paucity of rigorous evaluations of their effectiveness. Even more limited data exist on the cost-benefit implications of programmes. This review focuses on available UK and US literature on the effectiveness and cost-benefit analysis of interventions, and includes data from other countries where available. The following are the key findings from this review.

There is an evaluation gap.

The relative absence of rigorous programme evaluations in Europe means that there is insufficient data to allow robust analysis of the effectiveness of many interventions to reduce anti-social behaviour. However, there are some interesting evaluation initiatives currently underway in the Netherlands, such as the construction of cost-benefit models and careful tracking of new programmes. The UK is also increasingly attempting to assess and track the outcomes of interventions and programmes to reduce ASB and crime. This is important because evaluation of interventions allows comparison of programmes, and thus informed decision-making about the design and implementation of further programmes.

Early interventions can work, including those aimed at increasing participation in education.

There are some parenting training and early childhood interventions (including prenatal support) that have been rigorously evaluated and turn out to be some of the most effective forms of intervention for reducing crime in target populations. The positive effects on crime reduction found in evaluations of such programmes have been shown to persist through to adulthood (Karoly *et al*, 2005). Educational incentives such as educational maintenance allowances (EMAs) and graduation incentives may effectively reduce crime in at-risk populations.

Preventing recidivism can work.

There is insufficient information gathered from evaluations and comparisons to draw firm conclusions about the effectiveness of Anti-Social Behaviour Orders (ASBOs) and Acceptable Behaviour Contracts (ABCs). However, there are more rigorously evaluated interventions – such as multi-systemic therapy and cognitive behavioural programmes – that have been shown to reduce recidivism. The data on the effectiveness of punitive

measures is ambiguous at best, but many developmental or rehabilitative programmes show positive results. These include cognitive behavioural programmes, interpersonal skills training and counselling, and family-based interventions.

Restorative justice merits further evaluation.

Restorative justice interventions bring offenders into contact with the consequences of their actions, in the form of meeting with the victims of crime or being made aware of the extent of damage to property. Given the difficulties offenders may have with impulse-control and with taking account of the impact of their behaviour (Gottfredson and Hirschi, 2000), it may prove effective to show individuals the harm they have caused, and, as in some cases of restorative justice programmes, to require them to compensate for that harm by repairing damage or by engaging in community service. Thus, restorative justice is a form of intervention that merits further evaluation. Apart from possible benefits for offenders, restorative justice programmes may be linked with improved outcomes for victims by giving them a sense of control in the process, and may thereby reduce psychological ramifications associated with being a victim of crime (New Zealand Youth Justice).

Situational interventions can be an effective means of reducing offending.

Situational interventions are designed to reduce the opportunity to offend in a given context. Implementing such interventions is an acknowledgement of the complex confluence of factors determining the incidence of crime, including the offender's proclivity, the vulnerability of victims and the situational variables that make criminal activity more likely or act as deterrents. Encouraging prosocial behaviour, for example by keeping neighbourhoods clean and free of litter, and improving other features of the context such as street lighting can effectively reduce the incidence of crime and ASB.

ASB and crime are expensive.

There are a range of direct costs, such as property damage, associated with ASB and crime. These are relatively straightforward to quantify. There are also significant wider, indirect costs to the community, to victims, to local businesses, etc. that are less readily quantifiable. However, measures of direct and indirect costs of ASB and crime are high. Aggregate data suggest that the cost of vandalism alone is in excess of one billion pounds annually in the UK, and that the savings by diverting an individual from future involvement in ASB and crime in the USA ranges from 1.7 to 2.3 million dollars. These significant costs and potential savings highlight the importance of implementing and evaluating interventions to prevent or reduce offending.

Cost-benefit matters when choosing between intervention options to optimise the allocation of funds.

Cost-benefit ratios provide information about the unit of money saved, or the benefit, for a given unit of money invested by implementing an intervention. This ratio provides a useful 'at-a-glance' understanding of what may be the most efficient use of resources when choosing between ASB and crime-reduction interventions. In order to make these calculations data are needed about the differential effectiveness of programmes, the cost of those programmes, and the benefits, or money saved, by reducing or preventing offending. Comparing well evaluated, effective interventions, produces a range of cost-benefit ratios,

with the lowest (in the meta-analyses covered in this report) providing a benefit of only 1.26 pounds for every pound spent and the highest providing a return of 17.07. However, cost benefit is not the whole story. There may be benefits associated with certain 'lower-yield' interventions that are more difficult to quantify or are in any case deemed worthy of pursuing. For example, the cost-benefit ratio of 1.26 pertains to Nurse-Family Partnerships lower-risk sample. Implementing the programme has a much lower yield with a lower-risk sample than it does with a higher-risk sample. This may be due to the fact that in the lower-risk sample fewer of the children would actually have gone on to become offenders. While the higher-risk sample therefore has a higher cost-benefit ratio, policy makers may nonetheless decide that it is worth intervening for the benefit of those few children who would have gone on to become offenders. It is also possible that certain high-yield programmes may be difficult or less desirable to implement, for example because of political sensitivity or high start-up costs.

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What is Anti-Social Behaviour?

Anti-social behaviour is a concept used in the UK to encompass behaviours that cause harm or distress to others. These behaviours include littering, vandalism, kerb crawling, reckless driving, and shoplifting among others. In the United States, where much research on ASB is conducted, the concept refers to a cluster of related behaviours, including disobedience, aggression, temper tantrums, stealing, and violence, which can be strong predictors of future delinquent and criminal activity. This review uses the definition of ASB provided in the Crime and Disorder Act (1998) as its point of departure. The Act defines ASB as “acting in a manner that caused or was likely to cause harassment, alarm or distress to one or more persons not of the same household as [the defendant]”.

Anti-social behaviour is an increasingly key topic of public concern. According to Home Office statistics, around 66,000 reports of anti-social behaviour (ASB) are made to authorities each day.² Vandalism alone, one type of ASB, is estimated to cost the victims and the Criminal Justice system around £1.3 billion a year (Social Exclusion Unit, 2000a). The British Crime Survey 2003/4, reports that 76% of people perceive one or more types of anti-social behaviour to be a problem (Wood, 2004). In this context, Government is introducing new legal instruments and policy initiatives to tackle ASB. The National Audit Office (NAO) has begun a study of the use of a range of measures used by the Home Office to address the problem.

As part of its study, the NAO commissioned a review of the existing literature on the effectiveness and cost-benefit of interventions. The NAO study will focus specifically on the cost-effectiveness of interventions. This review is intended to identify and synthesise research and literature relevant to the issues addressed by the NAO study. Due to time and space constraints, this is not intended to be a comprehensive review of interventions. It is instead intended to provide an overview of the effectiveness primarily of well-evaluated programmes. However, the review includes relevant initiatives in the UK and others internationally, where they add substantially to the discussion.

RAND Europe conducted this literature review by undertaking desk-based research in English, French, German, Spanish and Dutch to identify and review the most relevant sources (for more details on methodology see Appendix A).

² Home Office website: <http://www.homeoffice.gov.uk/anti-social-behaviour/>

Anti-social behaviour is a concept used differently in different countries

The concept of anti-social behaviour is not widely used outside of the United Kingdom. In the United States, the term is used to refer primarily to conduct disorders, and the relationship between conduct or behavioural disorders and offending, delinquency and crime. Nonetheless, there is a vast literature dealing with interventions to prevent ASB, delinquency and minor criminal activity, which we draw on in this review. While this review refers to literature dealing with measures to prevent ASB and delinquency amongst people of all ages, much of the available relevant research is on interventions to address youth offending. This is because young people are commonly considered to be the prime perpetrators of ASB acts (Campbell, 2002).³ Much of this literature comes from North America and the United Kingdom, although, as mentioned above, relevant findings from other European countries are also discussed.

Definitions of ASB range from those focusing on its impact (for example, according to the Scottish Affairs Committee Inquiry into Housing and Anti-Social Behaviour 1996, ASB is “behaviour by one household or individual that threatens the physical or mental health, safety or security of other households and individuals”) to those that specify the types of behaviours that can be considered anti-social (usually those for which anti-social behaviour orders have been granted). Nonetheless, the latter often show variance in the range of behaviours included. This variance is exacerbated by differences in perceptions of what constitutes problematic behaviour. For example, in one neighbourhood dropping sweet wrappers may cause sufficient discontent to be seen as ASB, whereas in others people are more concerned about drug dealing occurring on street corners. The most widely used definition, and the one that this review uses as a starting point, is that of the Crime and Disorder Act (1998), which defines ASB as “acting in a manner that caused or was likely to cause harassment, alarm or distress to one or more persons not of the same household as [the defendant]”. This definition focuses on the impact of ASB and differentiates ASB from the more serious end of the criminal spectrum.

In the United States, where much research on interventions to reduce criminal offending is conducted, the concept of ASB refers to what has been defined as “a cluster of related behaviours, including disobedience, aggression, temper tantrums, lying, stealing, and violence” (Eddy and Reid, 2002: p. 20). While ASB is seen as a conduct disorder (thus emphasising its psychological dimension), American scholarship recognises that ASB in childhood and adolescence serves as “the strongest predictor of adjustment problems *including criminal behaviour*, during adulthood” (ibid, p 21 emphasis added), thus making the link between the psychological dimension and its social, legal and criminological ramifications.

The closest US equivalent to the concept of ASB as used in the UK is *juvenile delinquency*, a “sociological category that refers to children and adolescents who break the law” (Woolfenden *et al*, 2004: p 252). Juvenile delinquency and ASB are not exact equivalents. This is especially evident given the application of ASB to behaviours associated with adults and families as well as young people more specifically. However, there is a great deal of

³ See also Social Exclusion Unit (2000) *Report of Policy Action Team 8: Anti-Social Behaviour*, National Strategy for Neighbourhood Renewal, Home Office.

overlap in the phenomena they refer to, and in the types of interventions used to address them. For this reason, this review includes in some detail (bearing in mind limitations of space) the US literature on prevention of juvenile delinquency, which provides useful findings on effective measures.

This review is structured as follows. Chapter 1 describes the problematic scarcity of evaluations (relative to numbers of interventions) encountered when searching for and interpreting information on effective interventions to prevent offending and recidivism. Chapter 2 provides an overview and synthesis of the literature on a range of interventions – chosen primarily on the basis of the availability of reliable data - and their effectiveness. The section begins by outlining a broad typology of interventions, followed by a discussion of findings from the literature on interventions, including relevant European programmes. Chapter 3 focuses on the economic dimension of interventions to tackle anti-social behaviour. This section discusses the issues involved in understanding the costs of ASB and minor criminal activity and the benefits of ASB and crime-reduction interventions, and reports on selected studies of the cost-benefits associated with interventions. A note on the methodology used in conducting this review is provided in Appendix A.

- Rigorous evaluations of interventions to reduce ASB and crime allow informed decision-making about future policies and programmes.
- There is no strong tradition of rigorous evaluations of interventions in Europe, but there are interesting initiatives in this direction.
- Data on the effectiveness of interventions rely heavily on research produced in the US.

Rigorous evaluation is instrumental for understanding the effectiveness, economy and efficiency of social policies and programmes. While evaluation of public policies and programmes is reasonably well established in some countries (most notably the United States, and to a certain extent Canada), there is not such a strong tradition of evaluation in Europe. Within Europe, the Netherlands has a stronger ‘culture of evaluation’ in this area than elsewhere, and the UK is increasingly attempting to assess and track the outcomes of interventions and programmes.⁴ In the context of interventions to reduce ASB and crime, findings based on careful evaluation allow comparison of programmes, and thus informed decision-making about ways forward for the design and implementation of further programmes. In order to provide a useful evidence base for programme development and implementation, analysts recommend that evaluations provide several key types of information about interventions, many of which require *a priori* awareness. These recommendations tend to include:

- Explaining how terms are used and what measures mean, thereby allowing meta-analyses to more readily standardise the data and allow analysts to compare like with like
- Including before and after data about the participants/rates of offending etc.
- Matching the participant group to a control group where possible (on whom the intervention is not implemented, or if *ex post* evaluation then look for a similar

⁴ Research Development Statistics (RDS) is a good example of the attempt to undertake rigorous evaluations of interventions. The idea is to make these evaluations accessible to the public and policy makers by posting them on their web site (Halpern 2006, personal communication).

group elsewhere who did not participate in such a programme)⁵ so that researchers can know what is likely to have happened in the absence of the intervention

- Looking to see if the findings are replicated when the intervention is implemented elsewhere so that there can be some confidence that the effect was not a ‘one-off’
- Including longitudinal data so that researchers know whether or not the effect persists for a substantial length of time after the intervention

Given the relative absence of such information for most policies and programmes in Europe, the data on effectiveness of interventions relies heavily on findings from US-based studies and meta-analyses. However, there are moves towards better evaluation in Europe as well. For example, in the Netherlands the Ministry of Justice (WODC) and the Universities of Leiden and Rotterdam are undertaking research including meta-analyses and the construction of cost-benefit models to inform the academic and policy communities about what seems to be working in terms of reducing crime and anti-social behaviour (see, for example, Versantvoort, 2005; other WODC reports, *forthcoming*).⁶

The relative dearth of evaluations in Europe does not mean that it is impossible to draw any indicative conclusions about the effectiveness of European programmes. Where UK and other European data seem to come to the same or similar conclusions about certain types of programmes, it is possible to be relatively confident in those findings.⁷

Randomised control trials (RCTs)⁸ are widely viewed as ‘the gold standard’ for evaluation purposes. However, Karoly and others (see for example Tilley, 2001) note that there are significant regional variations in key aspects of the political, socio-economic and cultural context even within the same city or country. Indeed it is possible that the outcome of an intervention in one community would vary by gender and ethnic minority status of participants. While there is some evidence to suggest that rates of re-offending do not vary widely by ethnic minority and gender of participants (Lipsey, 1998), there are few more recent studies to support or confirm this finding.

The local variation inherent in the context of interventions renders international comparisons even more complicated, and RCT and other evaluation methods do not necessarily take adequate account of such contextual differences. Given this complexity, it is useful to think in terms of focusing on, and controlling where possible, the most relevant factors in a given intervention. Or, as Tilley points out “(a) judgement has to be made

⁵ Although as Karoly and others point out, when schemes are as widely implemented as they tend to be now in the US and the Netherlands, the control group may not be possible, or may be a group who participated in a different type of intervention.

⁶ Forthcoming research by the WODC includes: an investigation into the cost and benefits of judicial behavioural interventions (WODC, SEO Economisch Onderzoek, Projectnumber 1273A); an overview of an intervention to reduce violence, not yet evaluated (WODC, Projectnumber 1473) and; a meta-analysis of Dutch studies on the effects of interventions (WODC, Projectnumber 1321).

⁷ For example, Graduation Incentives such as the Quantum Opportunities Fund in the US and EMAs in the UK (Feinstein and Sabates 2005).

⁸ RCTs are interventions where a programme is implemented in one group but not in another, with participants randomly assigned to the groups. While this method is highly valued in evaluation studies for eliminating many biases, using them does not ensure that all of the relevant features of a given context are taken into account, as discussed further in this section.

about what matters in terms of similarity, both in terms of the intervention method itself and in terms of the context in which it is introduced. The key question, therefore, is what (conditions) need to be the same, and why? (2001: p.88).” Thus, when attempting any kind of ‘programme-grafting’, it is important to take account of local, contextual differences in populations and other factors.⁹

There has been growing interest in programmes in the US and Europe that appear to be effective at preventing and reducing ASB and crime. Karoly (2006 personal communication) notes that other countries are importing certain US-based programmes. However, to date no comparative data are available that shed light on how well programmes that are effective in one country work when they are implemented in another. The rolling out of programmes across countries, and the importing of apparently effective interventions elsewhere, provides a unique opportunity to evaluate and accumulate a growing evidence base about what works, what does not, and why.

⁹ When attempting to implement any successful programme elsewhere, the significant features of the programme need to be understood in detail and replicated with attention to the specificity of the new location. For example, as Karoly points out in the case of Nurse Family Partnerships it is important to attend to the level of qualification (registered nurse) of the professionals engaged with the participant families. Then an informed judgement can be made about the closest equivalent to that qualification in the new context. In the UK, for instance, it is possible that health visitors or midwives may be appropriate professionals for implementing certain aspects of the programme. Determining these equivalencies so that the appropriately skilled professionals are used to implement the programme successfully is important. It is also worth bearing in mind that knowing the skill level of the relevant professionals also allows the new programme to avoid using overskilled professionals, thereby reducing unnecessary programme costs.

- Early interventions aim to tackle risk factors from pregnancy through to early childhood and have been found to be effective.
- Educational interventions to prevent the onset of offending in at-risk youth can prevent the onset of delinquency.
- Coercive interventions, such as detention and imprisonment, have been found to produce nil or even negative effects in reducing recidivism.
- There is little reliable data on the effectiveness of ASBOs, a type of coercive intervention and a key measure to tackle ASB in the UK.
- Developmental/rehabilitative interventions can significantly reduce the rate of recidivism amongst young offenders.
- Situational interventions that aim to reduce the opportunity to commit crime, for example by improving street lighting, have also been found to be effective.

3.1 **Introduction**

There is an extensive literature, from the US in particular, on the range of interventions used to prevent the onset or recurrence of ASB. In this section we focus on three broad headings: early interventions, coercive and developmental interventions, and situational interventions.

Section 3.2 focuses on interventions to prevent onset of offending. These are called ‘early interventions’ and are targeted at children below the age of criminal responsibility, specifically those up to five years of age.¹⁰ These interventions often involve the children’s parents as well. Section 3.3 discusses interventions to prevent offending in at-risk youth.

Sections 3.4 and 3.5 focus on interventions to reduce recidivism in individuals already offending. These can be sub-divided into two types of approaches: coercive (also known as punitive) or developmental (or rehabilitative). Coercive interventions are designed as restrictive, regulatory or punitive measures, including imprisonment or detention, or civil

¹⁰ And increasingly seeking to include prenatal interventions for at-risk families.

sanctions such as anti-social behaviour orders (ASBOs). Developmental interventions aim to rehabilitate the offender by helping him/her develop skills and capacities to lead a more socially constructive lifestyle. This type of intervention includes behavioural, skills and education programmes for offenders (and sometimes their families). Some of these programmes also target youth at risk of offending and families whose children may eventually be at risk.

Finally, Section 3.6 refers to situational interventions, which are those that try to change aspects of the context in which crimes are occurring in order to reduce the opportunity for offending. These situational interventions acknowledge the social aspects of crime and the confluence of factors that result in a given crime being committed.¹¹

Table 1 provides an overview of the interventions covered in this section of the report.

As discussed in Chapter 2, variation in definitions of acts, differences in the implementation of interventions and the complexity of measures used for evaluating the effectiveness of interventions, necessitates a ‘handle with care’ approach to any given findings. In order to allow the reader to make judicious use of findings from the interventions discussed in this Chapter, where possible the discussion of studies includes information about the type of evaluation, if any, to which the interventions have been subjected.

3.2 Early interventions to prevent the onset of ASB and delinquency

Early interventions are critical to the prevention of crime and ASB because the presence of ASB and delinquent behaviour in a child is one of the strongest predictors of an individual’s future deviant or anti-social behaviour (Greenwood *et al*, 1998). Moreover, longitudinal studies reveal that poverty (i.e. low income, dependency on welfare), parents’ history of convictions and imprisonment, single parenthood, and youthfulness of parents are some of the factors most closely associated with the risk of ASB and delinquency in children’s later life.¹² For example, one longitudinal study conducted in the UK found that 63 per cent of boys with convicted fathers were subsequently convicted themselves; with 61 per cent of boys with convicted mothers also subsequently convicted: "Having a convicted parent at age 10 was the best single predictor of antisocial personality at age 32"

¹¹ Another broad type of interventions to tackle ASB is community intervention. Community interventions are those “designed to change the social conditions and social institutions (e.g. community norms and organisations) that influence anti-social behaviour in communities” (Farrington, 2003). We found no strong evaluations of the effectiveness of community interventions in reducing ASB and crime. However, studies suggest that there is an association between criminality and deprived areas where social cohesion and informal social controls are weak (ibid). There are many community interventions in the UK, such as Communities that Care, that have often been found to have positive outcomes - for example increasing community cohesion (Prior and Paris, 2005). This finding suggests that the rigorous evaluation of community interventions would be a useful focus for further research.

¹² Most longitudinal studies have been conducted in the USA and Canada. The classic *Cambridge Study in Delinquent Development* conducted by Farrington, while still influential, was conducted many years ago leaving the UK in need of recent evidence to draw further conclusions.

(Farrington 2003).¹³ This finding suggests that future ASB and delinquency can be prevented through interventions aimed at helping families overcome problems that may lead to the onset of these behaviours.¹⁴

Because we know with some confidence about risk factors for individuals' future ASB and criminal activity, it is possible to target early interventions reasonably effectively. This early targeting dovetails with an increasingly prominent agenda in the UK aimed at reducing social exclusion and improving outcomes for disadvantaged populations. This is because there is a strong overlap in risk factors for ASB and delinquency on the one hand, and social exclusion on the other, as well as in types of effective interventions to increase life chances.

Not only is it possible to target programmes fairly effectively, early interventions to divert individuals from offending have been found to be one of the most effective types of intervention overall. According to Scott *et al* who reviewed much of the UK and US literature on ASB “(t)here are effective interventions for ASB in children... Complementing a family-based approach, there are effective behaviour management and social skills programmes for primary schools. In contrast, interventions for serious antisocial behaviour in teenagers are much less effective. *Therefore there is a case for implementing effective early interventions with families and with school children*” (2001: p.7 our emphasis).

A review of studies of American early childhood interventions shows that, for those programmes for which assessments have been made, the impact of early intervention on criminal activity are favourable, “with lower incidence and seriousness associated with juvenile offences of those in treatment versus control groups” (Karoly *et al*, 1998). The strongest results, the study reports, seem to be associated with interventions that combine high quality daycare or preschool programmes with family support services.

This finding is supported by a number of other studies, for example one conducted by Syracuse University in the USA. The Syracuse study recruited 108 deprived families to participate in an experimental intervention, in which home visits¹⁵ and day care were provided from the third trimester of pregnancy until the child reached the age of five. Ten years after the intervention ended, a follow-up study by the same institution showed that only 6% of the children in the intervention's target group had been referred to probation compared to 22% of a group of matched controls (Greenwood *et al*, 1998).¹⁶

While early childhood interventions exist in the UK, for example parenting programmes offered by Youth Justice Teams, a review produced for the National Evaluation of the Children's Fund notes that there is still inadequate outcome data both for Children's Fund

¹³ According to Farrington, anti-social personality in this context refers to a cluster of associated behaviours such as committing property crimes, drunkenness, repeated lying and conning and reckless driving. It also includes personality traits such as lack of remorse or guilt feelings, aggressiveness, low frustration tolerance, impulsiveness and selfishness (2003, p.2).

¹⁴ See also Karoly and Barnes ed., 2004.

¹⁵ Home visits usually consist of programme staff (such as nurses or other staff in the care professions) visiting the family and providing support that strengthens the parents capacity to care for their children effectively (Karoly *et al*, 2005)

¹⁶ See also Farrington and Welsh, 1999 and 2003.

and Youth Justice Board programmes (YJB) (Prior and Paris, 2005). This finding is echoed by that of a review produced for the YJB which states that “in general, programmes that appear relevant to reducing the risks of children and young people becoming involved in crime have not been rigorously evaluated in the UK” (Communities that Care, 2005: p 69).

Following a review of the problem of crime and delinquency, and interventions to reduce crime other than imprisonment, the Canadian National Advisory on Prevention of Crime concluded that the best way to reduce crime is to improve the health of children, the stability of families, the quality of schools and education and to ensure better social cohesion generally. They termed this prevention of crime through social development, and concluded that it is a sound investment, with dividends including the reduction of violence, more security in communities and significant savings not only for the criminal justice system, but also for nearly all other agencies engaged in both public and private expenditure (CNPCC, 1996, accessed and translated August 2006).

3.3 Interventions targeting at-risk youth

Measures to prevent ASB and delinquency have also been developed targeting youths at risk of offending, and not exclusively those who have already committed an offence. A type of intervention for at-risk youths that has been rigorously evaluated is the educational incentive. Although it is not clear exactly what the relationship is between increased education and reduced crime, crime statistics in England and elsewhere appear to show that crime rates are lower in areas with higher levels of education, suggesting that education could have a potentially significant influence on an individual’s propensity to commit offences and ASB (Feinstein and Sabates, 2005). Education can reduce an individual’s likelihood of offending by increasing the expected value of income from legitimate employment that results from increased education; improving parenting skills, which has implications for rates of criminality in children; allocating time to school attendance and away from criminal activity; and increasing patience and risk aversion, a change in attitudes that can positively affect attitudes towards crime and ASB (ibid).

In the US, the Job Corps programme targets low income, primarily urban youth who have dropped out of school, and provides a range of training and counselling services including academic education, vocational training, counselling, health care and education, recreation and job placement (Karoly, 2003). The programme is unique in that it is provided on residential campuses all over the country, and lasts a full school year. Evaluations using randomised control trials found that participants in Job Corps were “less likely to have ever been arrested, convicted or incarcerated, and reported a smaller number of arrests and convictions” (Karoly, 2003: p 49).

Research from the US also found that graduation incentives consistently show positive results on reducing delinquency (Greenwood *et al*, 1998). For example, the Quantum Opportunity Programme (QOP), providing disadvantaged youths modest cash and scholarship incentives to stay at school, was found not only to significantly increase graduation and enrolment in college, but also to reduce crime. Observed arrests for

participants were “only three-tenths that of control students” (Feinstein and Sabates, 2005).

In the UK the Department for Education and Skills developed a programme, the Educational Maintenance Allowance (EMA), designed to increase participation and retention of 16-18 year olds in post-16 education in areas of low participation and high levels of deprivation (according to such measures as labour market inactivity and lack of qualifications) (ibid). The EMA became a national scheme in 2004, in which £10, £20 or £30 a week was paid directly to any young person qualifying to participate in the programme.

EMA also included retention bonuses worth up to £500 a year. While the main aim of the programme was to increase participation and retention of young people in post-16 education, it has been suggested that the introduction of EMA had a positive effect on juvenile crime reduction. The results of a study show that male conviction rates for burglary and theft offences (but not violent crime) fell more in the 15 LEAs that piloted the EMA programme than in the rest of the LEAs in England (ibid).¹⁷ Because the main indicator in this study was the rates of convictions, not of actual offences committed, the reductions in juvenile crime may in fact have been larger than estimated.¹⁸

Interventions for at-risk youth are rarely designed specifically to reduce delinquency and ASB. Rather, they aim to increase participation in education thus improving outcomes on a range of indicators, including labour market participation, income, and health (Schuller *et al*, 2002).¹⁹ Reductions in rates of offending can be, as with the EMAs and QOP, an unintended consequence of the intervention, or one of many desired outcomes.

3.4 Coercive interventions

In the UK, the primary sanction available to deal with ASB is the ASBO.²⁰ ASBOs were introduced by the Crime and Disorder Act (1998) and have been available since 1999. ASBOs were designed to deter ASB and prevent its escalation without having to resort to criminal sanctions (Campbell, 2002). The order consists of a prohibition, only applied to persons 10 years old and above, forbidding them to do a specific thing or to be in certain places, but it does not compel the offender to do anything. While at the time of writing there are no rigorous studies evaluating the effectiveness of ASBOs in reducing either the

¹⁷ These findings contrast with those of other studies of other types of interventions, such as behavioural and skills-based as examined by Lipsey, in that EMAs seem to have positive effects amongst non-serious offenders, whereas behavioural and skills-based programme tend to have the greatest effects amongst youths with a larger number of serious offences. This suggests that policies combining different approaches that target different types of offenders may have better overall outcomes in reducing juvenile crime and anti-social behaviour.

¹⁸ For some areas, the study examined the effects of the EMA together with the Home Office’s Reducing Burglary Initiative (RBI). The study was able to establish that positive results were stronger in those areas where both the EMA and RBI were in place. This finding raises “the importance of interconnectivity of departmental programmes” in preventing crime and providing social benefits for the population (Feinstein and Sabates 2005, page 26).

¹⁹ See also: Social Exclusion Unit, 1999.

²⁰ This section has been kept succinct to allow space for discussion of interventions that would be less known, and less accessible, to the NAO project team.

incidence of ASB in general or the incidence of re-offending in particular, interviews reveal that the view amongst those who have used them, such as local authority and police representatives, is that ASBOs are a useful tool to deal with the problem and can reduce ASB in individuals (ibid). Nonetheless, it is widely acknowledged that many agencies in different areas of the country have not yet capitalised on the use of ASBOs, at least in part due to procedural issues; the process of obtaining an ASBO from the court is slow, relatively expensive, and requires contact with a number of different agencies – police, local authorities, courts - which can be impeded by failures in partnership working.

While there is no methodologically sophisticated research evaluating the effectiveness of ASBOs, the available evidence tends to show that ‘coercive’ sanctions (those designed as restrictive, regulatory or punitive) cannot be relied on to prevent, or even necessarily to reduce, re-offending, particularly among young offenders (Prior and Paris, 2005). Lipsey, who conducted one of the most thorough and extensive meta-analyses of programme evaluations (he reviewed 440 evaluations), concluded that ‘deterrent’ or coercive sanctions appear to have negative effects on recidivism, leading to an average increase in the incidence of re-offending compared with control groups (YJB, 2001). A systematic review of over 500 evaluations commissioned by the American Department of Justice confirms Lipsey’s findings that interventions intended as deterrent measures tend to have no or negative effects on recidivism among young people (Prior and Paris, 2005).

However, an analysis of data from a longitudinal study of people from birth through age 26 in Dunedin, New Zealand, concluded that in fact deterrence in the form of threat of costly punishment for criminal behaviour does inhibit criminal behaviour in those most *at risk* of offending (Wright *et al*, 2004). This finding is significant for two reasons. Firstly, it does not fit with other findings that deterrence has a nil or negative effect, such as those discussed in Lipsey’s meta-analysis, mentioned above. Secondly, it suggests that individuals with low-self control and high impulsivity – and thus with criminal propensity - might in fact respond positively to the threat of punishment. The study concludes that “at sufficiently low levels of criminal propensity, these threatened punishments may have no deterrent effect at all”, but will exert a much greater influence on criminally prone individuals (ibid). It is important, however, to be careful about drawing conclusions from one study; the Dunedin findings may say more, for example, about the need to investigate the reasons for disparities in the outcomes of similar interventions in different places.

3.5 Developmental interventions

The notion that ‘nothing works’ in reducing re-offending, which was prevalent in the 1970s and 1980s, was challenged by a number of researchers who conducted studies revealing that some developmental approaches did in fact have positive effects. These are discussed below.

Cognitive behavioural/therapeutic interventions

Cognitive behavioural approaches are those that seek to address the ways in which “thoughts, feelings and behaviour are interrelated”, and which see dysfunctional behaviour as a product of “personal/internal and situational/external factors” (Feilzer *et al*, 2004). While there is a paucity of methodologically sophisticated evaluations of UK cognitive

behavioural programmes, a number of studies have been conducted that suggest the effectiveness of this approach. Two programmes in Scotland, the Inverclyde Project and the Freagarrach Project – both of which are Intensive Supervision Programmes²¹- produced evidence of success; the overall rate of offending by participants fell by between 20% and 50% in the year after they began attending. The programmes worked intensively with young offenders with a skills-oriented and cognitive behavioural approach with high intensity of “contact with committed staff, individualised work and an accepting and caring culture” (YJB, 2001).

The national evaluation of the Youth Justice Board’s cognitive behaviour projects, conducted in 2004, on the other hand, yields a more complex picture of the situation in the UK. Although the evaluation was intended to find out whether the programme was achieving its objectives, methodological difficulties meant that the study turned out to be solely a process evaluation (Feilzer *et al*, 2004). In particular, problems included the poor quality of the data available to the national evaluation team, the large variation in scope and nature of the projects studied, and the lack of a consistent research methodology employed by local evaluators (particularly the lack of control groups). As a result, the finding that reconviction rates amongst persistent young offenders remained high at 80% (even though young people and project staff reported positive effects of the interventions) is considered significant but inconclusive.

An American meta-analysis of 200 rigorously selected studies found that the most effective interventions for non-institutionalised juvenile offenders were individual counselling, interpersonal skills training and behavioural programmes (Lipsey and Wilson, 1998; Lipsey, 2000). These were shown to reduce recidivism by about 40%. It is worth noting that effects were most strongly related to the offender’s history of prior offences; that is, according to this study, *interventions have larger effects for offenders that had committed a greater numbers of prior serious offences.*²² Of the programmes evaluated, those taking place within the community showed better results than those in institutional settings. Although the studies reviewed are primarily from the US and Canada, it is possible that similar positive outcomes could be achieved in the UK. Cognitive behavioural programmes are already in place in the UK (for example the Youth Justice Board supports over 20 cognitive behavioural projects throughout the UK such as the Monmouth One-to-One Cognitive Behavioural Project (Feilzer *et al*, 2004)); what is now required are rigorous, methodologically sound evaluations to assess their effectiveness (Feilzer *et al*, 2004).

²¹ Intensive Supervision and Surveillance Programmes are non-custodial intervention for young offenders. They combine community-based surveillance with a supervision element consisting of education and training, family support, interpersonal skills development, and other measures. See Youth Justice Board.

²² Another meta-analysis of more than 400 studies (briefly discussed in the section on Coercive Interventions) or programmes for juvenile delinquents conducted by Mark Lipsey in 1992 found similar results. Behavioural, skills oriented and multi-modal programmes produce the largest effects (Lipsey, M, (1992) cited in Greenwood. *et al* (1998) *Diverting Children from a Life of Crime: Measuring Costs and Benefits*, RAND Monograph Report, MR-699-1-UCB/RC/IF, Santa Monica, USA). This conclusion is supported by a more recent study conducted in California, which shows that youths in California’s long-term Community Treatment Project did as well and often outperform institutionalised youth on a number of different indicators over time (Palmer 2002, cited in Lane *et al* (2005) *Evaluating an Experimental Intensive Juvenile Probation Program: Supervision and Official Outcomes*, Crime and Delinquency 51:1, pages 26-52).

Evaluations that gather data on the types and seriousness of the offences of participants in order to disaggregate the outcomes and provide a clearer picture of what is working and with what kind of offender, can make a useful contribution to understanding such interventions. From evaluations that have disaggregated that data, it appears that some interventions have stronger effects on serious offenders (Greenwood *et al*, 1998). More studies are needed that examine whether ASBOs are having an impact on recidivism, and what types of offender the ASBO will affect more strongly.

Family-based interventions

Another type of intervention to prevent re-offending involves not only the offender but also his/her family. There is a wide range of family and parenting interventions, including parent training, multi-systemic therapy (MST), and interventions for children in foster care. A meta-analysis of eight randomised control trials of parenting and family interventions in the USA, Canada and Norway, for example, found that these interventions can result in a reduction in the risk of juvenile delinquents being “rearrested one to three years after the completion of the programme” (Woolfenden *et al*, 2004: p 255). The analysis also shows that there is preliminary evidence that this type of intervention can also have an effect in reducing future sibling delinquency. While no rigorous evaluations of this type of interventions have been produced in the UK, interest in parenting and family-based initiatives has grown since the passing of the Parenting Order in the Crime and Disorder Act (1998).

It has been suggested that MST, one type of family intervention examined in this meta-analysis, is one of the most effective approaches to tackling youth offending and serious behavioural problems (especially ASB) (Leischied and Cunningham, 1998; Aos *et al*, 2001). MST is a family-based therapy, tailored to fit the specific needs of individual families, targeting the multiple risk factors for delinquency and behavioural problems in children and adolescents.²³

Restorative justice

There is growing interest in restorative justice as an innovative rehabilitative approach to dealing with offenders. The predominant view of restorative justice in the UK is that it consists of a “process whereby the parties with a stake in a particular offence come together to resolve collectively how to deal with the aftermath of the offence and its implications for

²³ However, a systematic review of MST interventions only (as opposed to a review of many types of family interventions simultaneously) in the USA revealed that “available evidence does *not* support the hypothesis that MST is consistently more effective than usual services or other interventions for youth with social, emotional, or behavioural problems”. This study represents a somewhat lonely voice in the literature around MST and suggests that because the available evidence on the superiority or otherwise of MST over other types of intervention is not conclusive, further research is necessary. In addition, the high cost of this type of intervention merits further examination of its relative effectiveness in view of the cost-benefit implications of implementing this vs. other less expensive alternatives (Littell, J. H, Popa, M. and Forsythe, B. (2006) *Multisystemic Therapy for Social, Emotional, and Behavioural Problems in Youth Aged 10-17* (review), The Cochrane Collaboration, The Cochrane Library 2006, issue 3).

the future” (Marshall, 1996).²⁴ While according to this definition the process involves the offender *as well as* the victim (and other stakeholders such as the offender’s family, local authorities, police, etc), in practice some restorative justice approaches, such as Referral Orders in the UK, do not necessarily involve the victim. In these cases, restorative justice aims to reduce the harm caused by the offender rather than to involve all stakeholders in a process of redress.

In the UK the Youth Justice and Criminal Evidence Act (1999) introduced Referral Orders, applied to all 10-17 year olds convicted for the first time. A referral order involves referring the offender to a youth offender panel, where the restorative justice process can take place (while the offender and his/her family are always present, the victim’s presence is not always guaranteed) (Prior and Paris, 2005).²⁵ The Youth Justice Board (YJB) has also funded a number of restorative justice schemes, including Family Group Conferencing. Both the Home Office and the YJB commissioned evaluations of their restorative justice projects. The evaluation measured whether the ‘contract’ agreed by the stakeholders was completed without the young person offending again. While results seem positive (for example, a 75% success rate for those cases where only one offence was under consideration in Referral Orders),²⁶ the findings are not conclusive due to the lack of control group or comparability to other reconviction studies (*ibid*).²⁷ Interest in restorative justice in the US (also called community justice) is also growing, but as in the UK, evaluation research has been inadequate thus producing very limited data on its impact on recidivism and other potential positive outcomes such as strengthening communities (Kurki, 2000).

Another measure used in the UK to tackle ASB is the use of Acceptable Behaviour Contracts (ABCs). These consist of voluntary agreements made between the individual and a local agency (such as the landlord or local authority, or both), and are meant to provide a positive space where the offender can acknowledge his/her anti-social behaviour, recognise its negative impact on others, and often agree to stop the ASB or engage in an activity such as attend local youth diversion schemes (Youth Justice Board, 2004). The evidence on the effectiveness of ABCs to prevent re-offending is rather scant. An evaluation of ABCs in Islington found that during the first six months of the contract, 43% of the offenders came the attention of the authorities for ASB, compared to 63% in the six months prior to the ABC, while another study found that 39 out of 42 police forces surveyed felt that the scheme was positive (Halpern *et al*, 2004). However, as with ASBOs, further research is necessary to measure the longer-term effectiveness of ABCs in preventing offenders from committing further acts of ASB.

²⁴ See also: Morrison and Ahmed, 2006. For benefits of the restorative justice process to victims, see Strang, H. *et al* 2006. For restorative justice in New Zealand, where the approach was first developed, see: Maxwell and Morris 2006.

²⁵ See also: Renshaw, J. (2002) *Restorative Justice*, Youth Justice Board, UK.

²⁶ Although it is important to bear in mind that these are first time offenders and look at what their expected rate of recidivism would be without that programme in place.

²⁷ See also: YJB (2001) *Risk and protective Factors Associated with Youth Crime and Effective Interventions to Prevent it*, Youth Justice Board, UK.

An example of a restorative justice programme for which robust outcome data exist is the Halt Scheme from the Netherlands (Coester, 2002).²⁸ The Halt Scheme, an extra-judicial response to acts of vandalism committed by young people, offered those arrested the possibility to work or pay as a means of rectifying their offence. Since the early 1980s, when the programme was established, the objective of the Halt Scheme has broadened to address offences other than vandalism, including theft and shoplifting. Research from the programme's pilot stages indicates that the Halt Scheme has had positive results in terms of reducing recidivism. After contact with the Scheme, over 60% of the young people reduced offending behaviour or ceased to commit acts of delinquency, compared to a control group where 25% committed fewer criminal acts, but where none stopped completely. While it is no longer possible to conduct research into rates of recidivism in controlled trials because the Halt Scheme is now established throughout the Netherlands, these initial findings are promising (ibid).

In New Zealand, the first country to legislate a move towards restorative justice as part of its strategy to deal with offenders, Family Group Conferencing (FGC) is considered one of the key elements of the youth justice system (Maxwell and Morris, 2006). FGC enables the offender and his/her family to come together to determine how the young person should be dealt with. Since its introduction, restorative justice in New Zealand has had positive effects in contributing to divert youths from courts and custody, increasing involvement in decision-making of the youth and his/her family, and ensuring that young people are made accountable for their crime. Nevertheless, it is not clear whether the use of restorative justice in New Zealand has had a positive effect in reducing recidivism. In addition, it appears that the needs of many young offenders referred to FGC remain unmet, particularly in relation to "mental health, drugs and alcohol, managing anger, improved interpersonal relationships, pro-social opportunities and building competencies in relation to motor vehicles and perhaps most importantly of all, in relation to educational and training options" (ibid. 255-6).

Educational and vocational interventions

Interventions focusing on providing vocational and other skills training for unemployed young adults with a criminal record have been piloted in Sweden. The KrAmi programme provides educational and vocational training opportunities, but also offers interpersonal skills training (Nystrom, 2003). The programme was evaluated for participant outcomes, and was found to have helped participants enter the labour force, a desired outcome perceived to contribute to the prevention of offending and recidivism, as well as to a reduction in costs to other agencies such as social services (Nystrom, 2003). Follow up interviews six months after the end of the programme revealed decreased levels of self-reported delinquency, but the findings are not conclusive due to the lack of control group, the short time-span for follow up and the unreliability of self-report results obtained through interviews. Thus, although initial findings look positive, methodologically sound evaluations are not yet available to draw conclusions about the KrAmi programme's effectiveness in reducing recidivism and ASB.²⁹

²⁸ See also: van Hees, 1999.

²⁹ For a review of other interventions in mainland Europe see Buckland and Stevens, 2001.

Other types of interventions targeted at children and young people who are at risk or have already committed offences include mentoring schemes, after school programmes, and community-based programmes such as housing management initiatives and monitoring of gang activities.³⁰ However, while some evaluations of these different programmes have been conducted, most are not methodologically rigorous, making the results inconclusive (Prior and Paris, 2005; Powell, 2004).

3.6 Situational interventions

This review, reflecting the preoccupations of much of the current literature and interventions on which the literature is based, focuses primarily on person-centred interventions. However, there is widespread recognition that much crime is contextual and opportunistic, and situational interventions – those designed to reduce the opportunities to offend - can be an effective means of reducing crime (Tonry and Farrington, 1995).³¹ Situational interventions could include, for example, avoiding simultaneous closing of pubs, avoiding use of glasses and bottles in pubs (substituting plastic), making taxis more readily accessible during the hours of darkness, and improving street lighting.

For example, a meta-analysis of rigorously selected evaluations of the effectiveness of improved street lighting on reducing crime showed that “improved street lighting led to significant reductions in crime and with an overall reduction in recorded crime of 20 per cent across all the experimental areas” (Farrington and Welsh, 2002, p.I). Improved street lighting can reduce offending by either increasing surveillance of potential offenders (thus reducing crime primarily in the hours of darkness), or by signaling that the community is increasing investment in the area, “leading to increased community pride, community cohesiveness and informal social control” (which would imply a reduction of crime both during the day and night) (ibid, p.V).

Further, the psychology literature is replete with examples of how it is possible to cue people’s behaviour by setting the scene in a given context thereby influencing subsequent behaviour. For example, a study conducted in a US supermarket revealed that littering the aisles with fliers was common when the store was already full of litter, whereas when the store was clean and free of litter, there were hardly any occurrences of littering (Zimbardo and Leippe, 1991). This finding resonates with informal reports from police in the UK who have the impression that giving out more Fixed Penalty Notices (FPNs) early in the evening may lead to fewer offences being committed later on.³²

The outcome of situational interventions can go beyond the reduction of crime and delinquency. Street lighting and clean spaces, for example, can contribute to perceptions of public safety and to increased use of public places by law-abiding citizens (Farrington and

³⁰ See, for example, the Big Brothers and Big Sisters scheme, outlined in Karoly, 2003 p.8.

³¹ It is worth noting that situational interventions have been criticised for generating a ‘displacement’ effect, whereby crime is displaced to areas where no such interventions are in place and the opportunities to offend are therefore greater. On the other hand, certain types of displacement can also be benign (the frustrated vandal/shoplifter plays basketball instead of offending) (Farrington and Welsh, 1995).

³² Senior policy official, personal communication.

Welsh, 2002). The context in which people act, and the cues set out for behaviour by those in a position to do so, owners of pubs, police, councils in control of litter collection, etc. are all significant contributors to determining whether or not criminal activity will occur. Approaches to reducing crime and ASB that take this into account by combining the efforts of several agencies and multiple types of interventions might be expected to have even more success than one intervention implemented on its own.

Table 1: Overview of interventions discussed in this chapter

Type of Intervention	Positive outcomes	Type of study	Evaluation	Other observations
Early Interventions				
Combined high quality day care, preschool programme and family support services	Reduced incidence and seriousness of offending	Meta-analysis (Karoly <i>et al</i> 1998)	Treatment vs control group	
Syracuse Study - Home visits and day care –prenatal to age 5	6% of participant children referred to probation vs 22% of control group	Single study of 108 families (Greenwood <i>et al</i> 1998)	Treatment vs control group and ten year follow up	
Interventions for at-risk youth				
Job Corp - Training and counselling services, including academic education, vocational training, health care and education, recreation and job placements	Reduced likelihood of arrest, conviction, incarceration and smaller number of reported arrests and convictions	Several evaluations of Job Corp (Karoly 2003)	Randomised control trials	Job Corp is a residential programme (i.e. participants based in campuses)
Quantum Opportunities Programme – educational incentives	Significantly increased graduation rates and reduced crime; observed arrests for participants three tenths that of control group	Single study of QOP (Karoly 2003; Feinstein and Sabates 2005)	Treatment vs control groups	
Educational Maintenance Allowance – post 16-education participation incentives	Juvenile crime reduction, reduced male conviction rates for burglary and theft	Single study of EMAs (Feinstein and Sabates 2005)	Comparison between EMA areas vs non-EMA areas	Did not have strong effect on reduction of serious crime
Coercive Interventions				
Anti-Social Behaviour Orders – targeted prohibition	In terms of breaches of ASBOs, out of 40 people given an order, 36% breached it, and 30% committed further offences by follow up	Review of ASBOs (Campbell 2002)	Wide-ranging Home Office review including observation, statistics, follow-up to assess breach of ASBOs	Limited value of findings due to lack of control groups, longer -term follow up, small sample size, controlling for other variables
Incarceration, imprisonment, 'scared straight' interventions	Nil or negative effect on reducing recidivism	Meta-analysis (Prior and Paris 2005; YJB 2001)	Treatment vs control groups	
Developmental Interventions				
Cognitive behavioural approaches	One of the most effective interventions to reduce recidivism (up to 40% reduction rate)	Meta-analysis (Lipsey and Wilson 1998; Lipsey 2000)	Treatment vs control groups	
Cognitive Behavioural approaches	Significant but inconclusive finding: 20% reduction in recidivism	National Evaluation of YJB programmes, UK (Feilzer, 2004)	Recorded observations without control groups	Evaluation not methodologically rigorous

Type of Intervention	Positive outcomes	Type of study	Evaluation	Other observations
Individual counselling, behavioural programmes and inter personal skills training	Each type of intervention shown to reduce recidivism by about 40%	Meta-analysis of interventions to reduce recidivism (Lipsey and Wilson, 1998)	Treatment vs. control groups	
Family-based interventions – including multi-systemic therapy and parenting training	Significant reduction in the risk of juveniles being rearrested on to three years after completion of the programme	Meta-analysis (Woolfenden <i>et al</i> 2004)	Randomised control trials	Also found to have a positive effect in reducing sibling delinquency
Restorative justice –including Family Group Conferencing	E.g. 75% success rate for those cases where only one offence under consideration with Referral Orders, but findings inconclusive due to lack of control groups or comparability to other reconviction studies	National evaluations – Home Office and YJB (Prior and Paris, 2005; Kurki, 2000)	Recorded observations without control groups	In New Zealand, for example, FGC found not to meet needs of offenders, especially in mental health, drug and alcohol abuse, managing anger, inter-personal relations, or educational opportunities amongst others (Maxwell and Morris, 2006)
Halt Scheme – Restorative justice process in the Netherlands	Over 60% of participants reduced re-offending or cease to offend altogether, vs. 25% less offending in comparison group	Single study of intervention (Coester, 2002)	Comparison of HALT pilot group with non-HALT group	Evaluations with control/comparison groups can no longer be conducted due to national roll-out of scheme
KrAmi Programme – educational and vocational training for offending youth and adults in Sweden	Increased participation in labour force and decreased incidence of self-reported criminal activity, but findings inconclusive due to short time-span for follow up, unreliability of self-report results, and lack of control group	Single study of intervention (Nyostrom, 2003)	Evaluation of participant outcomes, and comparison with on-KrAmi group	
Situational Interventions				
Improved street lighting	20% reduction of recorded crime	Systematic review of evaluations (Farrington and Welsh 2002)	Rigorously selected evaluations which included outcome measures for crime and before and after data in experimental and control areas	Other positive outcomes include increased community cohesion and social control

3.7 Conclusions

While it has been clear for many years that some person-centred interventions to tackle ASB and delinquency do in fact work, it is difficult to isolate the types of interventions that achieve the best results. This difficulty is partly due to the complexity of developing strategies that are based on “wide-ranging theories about the development of criminal potential in individuals and about the interaction between potential offenders and potential victims in situations that provide opportunities for crime” (Farrington and Welsh, 1995). In addition, the ‘best’ intervention also depends on the analyst’s views on what is the most desired outcome. It is possible, for example, to prioritise better quality of life for at-risk individuals, better social and community outcomes for areas vulnerable to ASB and crime, or overall reduction of crime and ASB across the board. Whichever types of outcomes are prioritised, it is necessary to have clear measures to gain some purchase on what could be called ‘most effective.’

This complexity notwithstanding it is possible to identify a number of principles of ‘what works’, particularly on interventions to reduce recidivism, from the available evidence (Communities that Care, 2005; Prior and Paris, 2005). These principles have been highlighted throughout this section, in describing the various characteristics of effective interventions. According to the studies surveyed here, some or all of the following feature in the most effective programmes

- Focus on the risk factors that increase the likelihood of offending behaviour, and not on those less directly related to it. e.g.: vocational training might have little effect on offending if not related to the onset of this behaviour.
- Relate the level of intervention to the seriousness of the offence.
- Set interventions in community settings as much as possible (as opposed to in custodial settings).
- Respond to the general and specific learning needs of the offender, that is, interventions that focus on the offender’s behavioural and skills needs (addressing specific issues in terms of gender, age, ethnicity and cultural identity).
- Multi-modal interventions in order to offer a range of opportunities for personal, social, economic and educational development to the young offender.
- Include cognitive component, to help offender work on the attitudes and belief that support ASB.
- Target high- and medium-risk offenders.
- Attend to the context in which criminal activities tend to take place and remove opportunities where possible.
- Demonstrate ‘programme integrity’, i.e. interventions with aims, methods, resources, staff, training, support, monitoring and evaluation are integrated and consistent.

Importantly, any type of direct intervention must be paralleled by indirect policies to reduce structural exclusion from social, educational and economic opportunities in their communities.

The following section goes some way towards shedding light on one widely acknowledged criteria for deciding on whether an intervention works: the costs of implementing a range of programmes and the savings and/or benefits that accrue to the outcomes of those programmes.

- Data about the effectiveness of interventions is most useful when accompanied by information about the benefits the programmes accrue *relative to the cost of implementation*.
- Interventions to prevent ASB and crime generate savings by reducing the costs to society of offending and of dealing with the consequences of offending.
- There is very limited data on the cost-benefit ratios of different types of interventions.
- Cost-benefit analyses conducted in the US reveal that early childhood interventions and educational interventions for at-risk youth provide the best value for money.
- The cost-benefit ratio of interventions may vary based on the group targeted, for example serious offenders vs. those committing low-level crime.

4.1 **Introduction**

ASB and crime are expensive. When choosing between the range of potentially effective interventions to reduce the costs of ASB and crime to the criminal justice system and to society, it is necessary to understand the types of costs incurred by ASB and crime, the costs of the different interventions, the effectiveness of the interventions at reducing offending, and the savings attributable to the reduction in offending. This type of economic calculation is called cost-benefit analysis.³³ It allows us to obtain the ratio of expenditure to savings accrued by putting a given programme into effect.

³³ There are other types of calculations that can be made about public programmes and interventions. To describe them in detail would be beyond the scope of this report. The RAND Europe research team focused on cost-benefit analysis because of the main options for calculating relative efficiency of utilising the range of possible programmes, cost-benefit analysis gives the fullest picture. One of the main alternatives is cost-effectiveness calculation that broadly provides information about whether a programme provides a worthwhile return in terms of effectiveness for its expenditure. See Scott *et al* (2001) for a fuller discussion of types of economic calculations in which they conclude that the ratio provided by cost-benefit is most useful because, to the extent that this is methodologically feasible, it allows comparison across currencies and over time, as providing the fullest quantification of savings.

There are certain direct and relatively easily quantifiable costs associated with ASB and criminal behaviour such as damage to property or public goods. For example, the unit cost for disposal of an abandoned vehicle is £215 (Whitehead *et al*, 2003) and crime, mainly consisting of vandalism, on public transport in the UK is estimated to cost £250 million (RDS 2004). There are also more indirect, less straightforwardly quantifiable, costs associated with criminal activity including burdens on agencies other than the criminal justice system. These costs are incurred, for example, by damaging the physical or psychological health of victims, the well-being of those in the community (both of which can generate costs to the health system as well as to the community in other ways), the business prosperity of local enterprises, and the productivity of those who spend time managing problems arising from ASB. For example, it has been found in the UK in a range of studies reviewed by Whitehead *et al* that between five and forty per cent of social landlords' time is spent dealing with complaints about behaviour, much of which would be considered ASB (2003: p. 27).³⁴

While it is difficult to quantify all of the direct and indirect costs of ASB and crime, we know that both are high (for example, vandalism alone is estimated to cost over £1 billion per annum in the UK (Social Exclusion Unit, 2000a)), and reducing harm caused by ASB and crime accrues wider benefits. For example, Scott *et al* have drawn on US data that show the overall savings by diverting an individual from a life of ASB and crime range from 1.7 to 2.3 million dollars (2001, p.193).

While it is certainly useful to know which programmes have been found to be the most effective in terms of preventing crime and reducing rates of reoffending, it is also important to remember that programmes vary considerably by cost of implementation. For example, Karoly *et al* (2005) provide a detailed analysis of the costs and benefits associated with 20 different early childhood intervention programmes (discussed further with cost-benefit ratios below). They found the costs of the programmes to range from \$1,681 for the least expensive,³⁵ up to \$49,021 for the most expensive³⁶ of the programmes.

It is evident from these vast differences in programme costs that from the perspective of policy and programme development, data about the effectiveness of interventions is most useful when accompanied by information about the benefits the programmes accrue *relative to the cost of implementation*. While this is an extremely difficult task even with interventions on which rigorous evaluations have been conducted,³⁷ it is possible from surveying the existing literature on costs and benefits to obtain a view of the current 'lie of

³⁴ For a much more detailed discussion of costs see Whitehead *et al* (2003) and Scott *et al* (2006, 2001). Whitehead *et al* provide useful overviews of costs associated with a range of ASBs including town centre management, legal action, abandoned vehicles, hoax calls, vandalism, alcohol consumption, demolition of property and housing management.

³⁵ This was the HIPPA USA programme. This programme was designed to help parents with little formal education prepare their children for entry to school (Karoly *et al* 2005, p.44) by giving them parenting classes and books with activities to engage their children, and including some home visits.

³⁶ This was the IHDP programme that aimed to reduce developmental, behavioural and other health problems through home visits and child care centre attendance (Karoly *et al* 2005, p.46).

³⁷ This is true because of the many factors that need to be taken into account when calculating costs as well as benefits. For example, the cost of implementing the same programme in different locations may vary because of differences in wage levels in those different areas. For useful and detailed discussions of the calculation of costs and benefits see Karoly (2003) and Welsh and Farrington (2000).

the land’ for cost-benefit analysis of ASB and crime interventions, thereby gaining insight to inform policy as well to identify gaps meriting further analysis.

4.2 Costs and effectiveness

Certain overviews provide us with enough information to know whether a programme is cost effective, but do not quantify the savings associated with the reduction in offending that they bring about. At times this last step is not possible because of gaps in the data on effectiveness. For example, even if we know that offending was reduced by a certain amount, we do not necessarily know what types of offending were reduced. Thus, it is not possible to quantify the savings from the reduction in offences. Just as programmes vary widely in their cost of implementation, offences vary widely in the savings accrued by prevention. Even when a selection of studies does not provide adequate information to allow quantification of savings, it is useful to get an overview of the programme costs and the reduction in crime considered to be the outcome of implementing the programme.

Greenwood *et al* (1998) calculate the costs of a range of programmes per participant and the rate of crime prevention of home visits and day-care, parent training, graduation incentives and delinquent supervision in Table 2.³⁸ This comparison shows that, of the interventions studied, graduation incentives, and even more dramatically parent training, give the best value for money in terms of prevention rates for adult and juvenile crime.

Table 2: Programme effectiveness and cost parameters

Parameter	Visits and daycare	Parent training	Graduation incentives	Delinquent supervision
Pilot prevention rate (%)	50	60	70	10
Effective prevention rate: juvenile crime (%)	24	29	56	8
Effective prevention rate: adult crime (%)	9	11	50	8
Cost per participant (thousands of 1996 dollars)	29.4	3.0	12.5	10.0

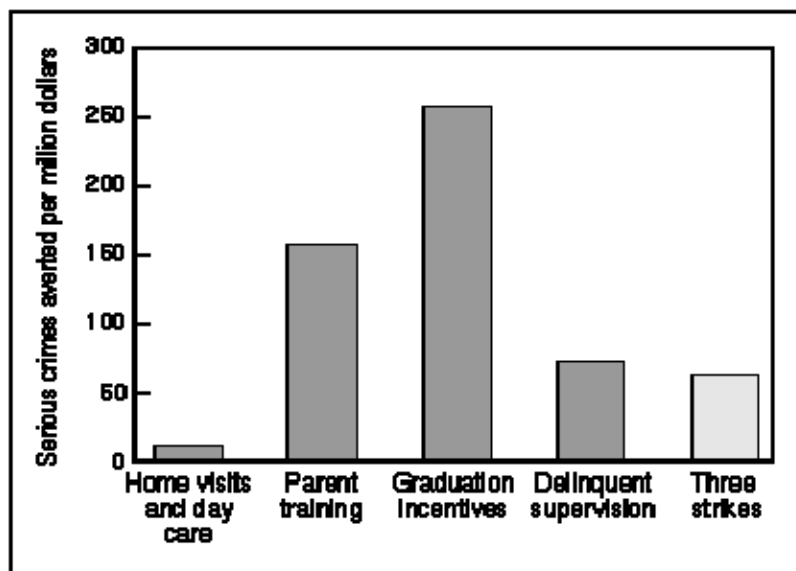
Source: Greenwood *et al* 1998.

Figure 1 (below) provides information about serious crimes averted per million dollars spent. While it is important to remember that this is *serious* crimes as opposed to ASB and more minor criminal behaviour, it nonetheless gives a useful indication of the costs and significant savings of implementing four developmental programmes, by comparison with

³⁸ The table summarises aggregate data from meta-analysis of various programmes in each category, with the exception of graduation incentives, which contains data from only one intervention, the Quantum Opportunity Programme.

the relatively less impressive results of the Three Strikes Law in California as an example of a punitive approach to reducing crime.

Figure 1: Cost-effectiveness of early-interventions, compared with that of California's Three Strikes Law



Source: Greenwood *et al* 1998.

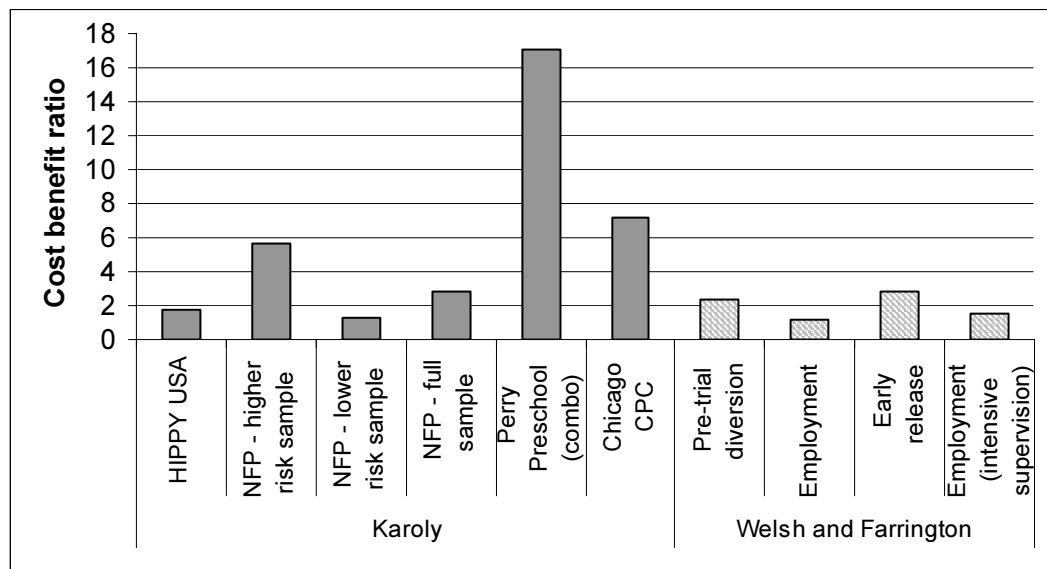
4.3 Cost-benefit analyses

These figures are useful. However, it is at times even more useful in thinking about further investment to have a ratio of savings to cost. When considering these ratios it is important to remember the complex calculations that have gone into standardising the information about costs and savings across different programmes, often described and evaluated by different researchers. For this reason it is only possible to compare programmes with strong evaluations and clear delineations of what their measures include (Karoly *et al*, 2003 and 2005). While there are many possible places at which to draw the boundaries for estimating benefits derived from reducing crime, there is consensus around the fact that measurement should at least include reduction of offending/recidivism, often calculated by quantifying the savings to the criminal justice system of fewer arrests being made, and more usefully can include attempting to quantify the benefits obtained by “improving other life-course outcomes such as employment, health, relationships and social service use” (Welsh and Farrington, 2001: p.119). Aos *et al* (2001) and Welsh and Farrington (2000) note that including cost to victims in cost-benefit calculations is uncommon, but can result in even greater savings (and this is relevant in getting a true figure on cost-benefit of restorative justice programmes).³⁹

³⁹ Karoly *et al* (2005) also point out that the savings to the public and the criminal justice system may occur at different points in time, even for programmes that are set up at the same time. This fact necessitates implementing a discounting rate for the financial savings quantified so that the analyst is comparing equivalent dollars, whether the savings were obtained in 1980 or 2000.

The main reviews of this literature include Greenwood *et al* (1998, as illustrated in Table 2 and Figure 1), Karoly (2003 and 2005) and Welsh and Farrington (2000). However, others such as Scott *et al* (2006 and 2001) and Jess (2005) provide additional insights from other studies and different perspectives. The following is a summary and synthesis of the cost-benefit findings of these reviews, with some additional data gleaned from individual studies where possible. From here the cost-benefit information is presented as ratios of unit of money saved per unit of money spent on the programme. So a cost-benefit ratio of 1.2 indicates that for every pound spent on that programme, a saving of 1.2 pounds could be expected in return. When looking at cost-benefit ratios, the most robust comparisons that can be made, with the highest confidence about their accuracy, are within-review comparisons of programmes. This is because the same measures are used or calculations made to inflate or deflate costs as necessary to allow a true comparison (Karoly 2003). Figure 2 provides an overview of the findings of Karoly *et al* and Welsh and Farrington’s meta-analyses of cost-benefit ratios.

Figure 2: Cost-benefit findings from Karoly *et al* 2005 and Welsh and Farrington 2000



Within-review findings show a wide range of cost-benefit ratios. For example, Welsh and Farrington found that of the seven interventions they costed, including four with strong experimental designs, the lowest cost-benefit ratio was 1.13 and the highest was 7.14 (Welsh and Farrington, 2000). Welsh and Farrington’s review included interventions with populations ranging from 18-44, in both community and institutional settings, including offences such as property offending, burglary, non-violent offending in general, general criminal offending, child molestation and substance abuse. The highest cost-benefit ratio of 7.14 was found for a community and residential substance abuse programme in which 3,055 adults participated. The second highest was a community early release programme aimed at 1,557 adults and youths who had been engaged in property offending in general. This programme came up with a cost-benefit ratio of 2.82. According to this review, the lowest cost-benefit was a community-based employment programme implemented in New York for 229 adults. Welsh and Farrington did not comment on patterns emerging from

this review, except to say that the evaluations with the largest samples showed the largest effects. However, they do note four of the studies quantified in economic terms the savings other than reduced recidivism. Of these four, in two of the studies the savings in terms of education, health, employment, substance use and social service use were greater than the savings accruing to a reduction in recidivism.

Karoly *et al* (2005) reviewed twenty early childhood intervention programmes. They found an even wider range of cost-benefit ratios for the programmes they compared. The highest cost benefit ratio was 17.07. This substantial benefit of 17.07 dollars for every dollar spent is the largest ratio in any of the reviews surveyed here. This ratio was for the Perry Preschool project that aimed to improve intellectual and social development for young children by using daily preschool and weekly home visits for children from three to five years of age.⁴⁰ The programme followed-up these children to age 40 and the effects were found to persist through to adulthood. The next highest cost-benefit ratio found in the review by Karoly *et al* (other than Perry Preschool in somewhat differing forms) was Chicago Child-Parent Centers which had a ratio of 7.14 (Karoly *et al*, 2005: p.110). This programme sought to promote cognitive and socio-emotional development to prepare children for school entry through preschool and elementary programmes and provision of parent resources, including parent involvement in class, part-day preschool and subsequent schooling. The Chicago CPC as it was known had a much smaller cost per child than Perry Preschool (\$6,913 compared with \$14,830), yet did not have quite the same effect in terms of total benefits to society per child, hence its lower cost-benefit ratio.

The next highest cost-benefit ratio of the programmes reviewed by Karoly and her colleagues was the Nurse-Family Partnership programme (higher risk sample) that cost just over \$7,000 per child and yielded a ratio of 5.70. This programme is of particular interest currently as its aims included the attempt “to improve prenatal health and birth outcomes; improve child health, development, and safety; (and) improve maternal life course outcomes” (Karoly *et al*, 2005: p.46). The intervention did so through home visits by trained nurses, following the mothers’ pregnancies and the early childhood of the babies, including approximately six to nine visits in pregnancy and twenty visits between birth and age two. Interestingly, the programme with the lowest cost-benefit ratio was also the Nurse-Family Partnership, but implemented with a lower-risk sample. This programme only achieved a ratio of 1.26. Karoly *et al* state that “(t)hese differences in results (between the higher and lower risk NFP samples) are due solely to the differential effect of the early childhood program on the higher-risk versus the lower-risk populations” (2005, p. 115).

This finding is relevant in the context of cost-benefit analysis as it highlights the differential economic ramifications of targeting different groups. However, it is also interesting in the context of findings from Lipsey and Wilson’s meta-analysis and Wright *et al*’s Dunedin study discussed in the previous chapter. While Karoly *et al* describe an intervention with stronger effects on a higher risk sample for early childhood intervention,

⁴⁰ The only other programme we have come across that achieves a similarly high cost-benefit ratio is the Elmira PEIP for higher-risk families. Higher-risk families were defined as single or low socio-economic status mothers having their first child. This programme, which ran in the US between 1978 and 1982 in Elmira, New York, provided home visits by trained nurses from the third trimester of pregnancy until the child was 2 years old (Karoly, *et al*, 1998).

the latter two studies show stronger effects for programmes implemented with more serious offenders. Further analysis is needed to determine the full implications of such findings for interventions to reduce offending and recidivism. However, this may be a worthwhile undertaking if it could shed light on the extent to which focusing interventions on the more serious end of ASB and criminal behaviours, and with higher risk groups, would be more effective and more efficient.⁴¹

4.4 Conclusion

Information obtained by careful evaluation about rates of effectiveness of interventions is useful when comparing programmes to reduce offending. However, when attempting to make informed decisions about implementing one programme or another, or when developing new interventions, information about the real costs of interventions and the savings to which they can lead is necessary. This type of cost-benefit analysis is complex and requires good information about many aspects of the programmes, as well as methodological sophistication in calculating costs and savings. For example, such analysis benefits from clarity about the structure and characteristics of interventions (types of offenders, types of professionals involved in the implementation of the programme, etc.), careful delineation of measures used in evaluations, an understanding of the significance of timing both as having an effect on programme outcomes and for calculating the true value of money when quantifying savings. Few studies provide such information, and even fewer undertake meta-analyses that then compare different studies by standardising these measures. Studies that do so provide extremely valuable insights into the relative costs and benefits of programmes (for example Karoly *et al.*, 2003, 2005; Welsh and Farrington, 2000). Having obtained these insights it is important to carefully explore possible underlying factors that have an effect on outcomes of given interventions, to maintain awareness of differences in national, regional and even community contexts when considering implementing successful programmes elsewhere, and to evaluate new programmes as they get underway so that a stock of knowledge can be built around the cost-benefits of different interventions to inform future decisions.

⁴¹ This is not to say that programmes aimed at lower-risk groups or less serious offenders should be abandoned. However, such an undertaking would give policy makers and those who develop programmes, as well as those delivering them, fuller information on which to base decisions about service funding, design and implementation.

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APPENDICES

Appendix A: Methodology

RAND Europe was commissioned by the National Audit Office to conduct a selective review of the effectiveness and cost-benefits of interventions to prevent the onset and recurrence of minor criminal activity and anti-social behaviour.

The research team's members were selected on the basis of their familiarity with the relevant area, and their experience in analysing and synthesising large bodies of information. The team defined the focus of the selective review in cooperation with the NAO in the early stages of the project, and agreed with the NAO project team an outline for the final report. The cooperative definition of focus and the agreed outline for the final report ensured best use of the project team, reduced the potential doubling of effort between the NAO and RAND project teams⁴² and tailored the review to the specific needs of the NAO in the context of its study of anti-social behaviour.

Having defined the focus of the work, the project team drew on input and expertise on evaluation and early interventions, anti-social behaviour and delinquency from the Labor and Population and Civil Justice Programmes of the RAND Corporation. The research team then undertook desk-based research, collecting relevant literature evaluating the effectiveness and cost-benefits of different types of interventions to reduce or prevent offending. Research consisted primarily of reviewing articles, research reports and books, drawing on relevant databases such as JSTOR and significant journals in the area, for example the European Journal on Criminal Policy and Research. Research reports and other relevant literature published by organisations such as the Institute of Psychiatry, the Youth Justice Board, the Institute of Education, the Campbell Collaboration, The Canadian National Advisory on Prevention of Crime, and the RAND Corporation itself all informed the research. These documents were then used to identify additional literature ('snowballing').

Capitalising on the language skills of its international staff, RAND Europe was able to consult relevant literature in English, French, German, Dutch and Spanish, indicating where there were noteworthy findings or programmes outside of the US and UK.

⁴² For example, the NAO project team had easy access to and intended to focus on Home Office research on ASB and crime.

The research team summarised the research in a series of headlines conveying the key findings emerging from the literature, to present to the NAO in advance of the submission of the final report. The headlines were presented in a power point presentation and discussed with the NAO. Through the discussion, the RAND and NAO teams clarified their understanding of certain key issues and discussed some of the conclusions that could be drawn from the findings.

Following this presentation, the RAND research team completed the final report, highlighting the key findings in an executive summary.

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