Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

Literature review

Interim tool developed for the West Midlands Violence Prevention Alliance
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Introduction

Youth violence, gang-related violence and knife crime are highly significant public health issues locally, nationally and internationally (Home Office, 2018) and (World Health Organization, 2016).

The West Midlands Violence Prevention Alliance (WMVPA) is a multi-agency collaboration co-led by the West Midlands Police and Public Health England. It aims to:

- work in line with World Health Organization principles to prevent violence across the West Midlands Police Force area (see Chapter 4)
- champion the importance of work that prevents violence and adversity within their own organisations and to networks and partners
- advocate for everyone playing their part in the work of building safe, healthy and resilient communities
- promote the Alliance and the adoption of its principles, encouraging the incorporation of prevention and early intervention into all relevant strategies, policies and programmes
- promote and signpost towards evidence and materials which provide examples of effective work and approaches relating to prevention and early intervention
- encourage their own organisations to be ‘proud’ Alliance members, promoting their prevention work and looking for opportunities to share inspiration and good news stories
- work and looking for opportunities to share inspiration and good news stories

The current WMVPA work programme includes:

- injury surveillance
- primary prevention for those not already involved in violence
  - In schools: Mentors in Violence Prevention
- secondary and tertiary prevention for those already involved in violence
  - In primary care: Identification and Referral to Improve Safety (IRIS)
  - In hospitals: Redthread, St Giles Trust
  - Across multiple organisations: Adverse Childhood Experience coordinators

The rise in violent crimes has precipitated the urgent need not only to utilise available funding to scale up these existing programmes, where they are working well, but also to consider additional evidence-based approaches to issues not currently addressed by these programmes. The Violence Prevention Alliance’s work, along with the work of the Police and Crime Commissioner-sponsored Gangs and Violence Commission and the local authority-led “Preventing Violence for Vulnerable People” work will be further developed now as part of the new West Midlands Violence Reduction Unit. This will be a multiagency
endeavour, underpinned by Public Health principles and practice, to prevent and reduce violence in all its forms.

This report summarises a rapid review of evidence relating to youth violence, gang-related violence and knife crime prevention approaches. The review aimed to serve as an interim tool to inform the WMVPA strategic approach and the development of a violence reduction unit in the short-term, whilst longer-term more substantial evidence review processes are underway around the country. These longer-term processes will ultimately provide more systematic and comprehensive appraisal of evidence, enabling more definitive conclusions to be reached regarding the approaches that are most likely to be effective in reducing youth violence in the United Kingdom.

The review aimed to highlight some of the key publications regarding violence prevention, and more specifically, prevention of youth violence, but did not attempt to be exhaustive.

Findings

Although, a substantial volume of evidence has emerged internationally, and particularly from the United States, evidence also continues to emerge from the United Kingdom. Multiple reviews have summarised this evidence including:

- **Protecting people Promoting health: A public health approach to violence prevention** (Bellis, Hughes, Perkins, & Bennett, 2012)
- **Preventing youth violence: an overview of the evidence** (World Health Organization, 2015)
- The Crime Reduction Toolkit, which was filtered to specifically consider interventions to address violence rather than to consider “all crimes” (College of Policing, 2015)
- **What works to prevent gang involvement, youth violence and crime** with a focus on the United Kingdom, published by the Early Intervention Foundation (EIF) (O’Connor & Waddell, 2015)
- **A Comprehensive Technical Package for the Prevention of Youth Violence and Associated Risk Behaviors** published by the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (David-Ferdon, et al., 2016)
- A review of evidence that was undertaken by the Home Office to inform the Serious Violence Strategy (Home Office, 2018)
- The Early Intervention Foundation Guidebook, which was filtered on interventions that impacted on crime, violence or antisocial behaviour (Early Intervention Foundation, 2017)

Internationally the most consistently cited approaches with the best evidence of effectiveness in preventing violence or violence associated risk factors are included in Table 1. These interventions address varying stages of the life course and can be led by varied organisations and professionals. However, this review identified many other approaches that seem promising, but for which limited evidence to support their effectiveness was revealed. For example, although there was not comprehensive evidence with regards to changes to alcohol policy and violence reduction, it has been estimated that over 40% of violent incidents are alcohol-related, and it therefore seems likely that this approach would be effective and worth further exploration (Office for National Statistics, 2018b).
Table 1-Interventions with the best evidence for effectiveness in preventing violence or violence associated risk factors from an international perspective according to the reviews examined (see Section 7.1)

<table>
<thead>
<tr>
<th>Primary prevention to avoid involvement in violence in individuals not already involved</th>
<th>Secondary and Tertiary prevention interventions to lessen harm and reduce future risk of violence in those already involved in violence*</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Parenting programmes</td>
<td>• Therapeutic approaches for young people already involved in violence</td>
</tr>
<tr>
<td>• Good quality early education</td>
<td>• Hotspots and community or problem-oriented policing</td>
</tr>
<tr>
<td>• Life and emotional skills training</td>
<td>• Restorative justice</td>
</tr>
<tr>
<td>• Bullying prevention programmes</td>
<td></td>
</tr>
<tr>
<td>• Therapeutic approaches for young people at greatest risk of becoming involved in violence</td>
<td></td>
</tr>
<tr>
<td>• Changes to firearms policy</td>
<td></td>
</tr>
<tr>
<td>• Hotspots and community or problem-oriented policing</td>
<td></td>
</tr>
</tbody>
</table>

*Secondary and tertiary prevention have been group together given the overlap between these approaches

There was no multi-sector review identified that considered the effectiveness of a broad range of interventions to address violence or violence associated risk factors that specifically related to United Kingdom-based populations, and presented a clear and comprehensive search strategy and consistent approach to quality appraisal. However, through utilising the *Early Intervention Foundation (EIF)* Guidebook, this review has identified a variety of different interventions with a reasonable quality of evidence in United Kingdom-based populations (Table 2). Whilst most of the reviews examined considered community-based, environment level interventions (see Section 7.1), the *EIF Guidebook* focussed on interventions delivered specially in childhood and adolescence (*Early Intervention Foundation, 2017*). Furthermore, the *Crime Reduction Toolkit* provides links to the systematic reviews considered within the toolkit, which, with additional capacity, could be further examined to identify United Kingdom-based studies regarding some of the violence prevention approaches not included in the *EIF Guidebook*.

The *Crime Reduction Toolkit* could also be further examined to consider the effectiveness of interventions that impact on crimes, other than violent crimes, that are potential risk factors for future violence. In the same way, the *EIF Guidebook* could be further examined to consider a wider array of early intervention outcomes other than crime, violence and antisocial behaviour, that are also risk factors for future involvement in violence. However, it is hoped that the most relevant interventions have been identified as part of this review through the triangulation of initial findings from these two resources with interventions presented in the other youth violence prevention reviews included. In addition to further examination of these resources, there would be benefit in identifying more recently published resources through a comprehensive search strategy. Interventions with more limited evidence from an international perspective (according to the reviews examined) that are potentially relevant to local need are summarised in Figure 1. Locally emerging evaluations should further add to this evidence base.
Table 2-Interventions with the most promising evidence (in terms of effectiveness of intervention and quality of evidence) in United Kingdom-based populations according to the EIF Guidebook (see Appendix B)

<table>
<thead>
<tr>
<th>Type of intervention</th>
<th>Mode of prevention</th>
<th>Programme examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenting programmes</td>
<td>Primary</td>
<td>• Incredible Years Preschool</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Incredible Years Age Basic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Empowering parents, empowering communities</td>
</tr>
<tr>
<td>Home visiting programmes</td>
<td>Primary</td>
<td>• Let’s Play in Tandem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The New Forest Parenting Programme</td>
</tr>
<tr>
<td>Good quality preschool education and schools-based emotional and life skills</td>
<td>Primary</td>
<td>• Incredible Years Teacher Classroom Management</td>
</tr>
<tr>
<td>Therapeutic approaches (cognitive, behavioural, social, or psychosocial) for young people at greatest risk of becoming involved in violence or already involved in violence</td>
<td>Primary Secondary and tertiary*</td>
<td>• Multisystemic Therapy</td>
</tr>
</tbody>
</table>

*Secondary and tertiary prevention have been group together given the overlap between these approaches

Figure 1-. Interventions with more limited evidence (compared to interventions included in Table 2) from an international perspective according to the reviews examined that are potentially relevant to local need (Secondary and tertiary prevention have been group together given the overlap between these approaches). (Purple–where United Kingdom-based examples of interventions were identified by the review but breadth and strength of evidence regarding them was not clarified).

As well as understanding the effectiveness of individual interventions, it is also important to understand how these interventions might be combined as part of a multi-component approach. Table 3 summarises three examples of multi-component place-based approaches to violence prevention and the different ways individual interventions have been combined. Whilst it is important to individually evaluate interventions involved in these combined approaches and determine their impact, it is also important to acknowledge that impacts are likely to be inter-related and dependent on context.

Conclusions
In developing local approaches to address the increased rates of knife crimes, as well as increases in youth violence more generally, there are signs of benefit in multicomponent approaches, relevant to local need, that incorporate evidence-based primary, secondary and tertiary preventative interventions, particularly in children and their families. The potential for interventions to actively achieve positive outcomes for individuals and communities rather than solely to prevent negative outcomes should also be considered. Common features of the multi-component approaches include strong multi-agency partnership, a long-term commitment to reducing rates of violence over years rather than months, and careful monitoring of impact through good quality data surveillance and rigorous evaluation processes (Figure 2).
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

Table 3-Examples of multi-component place-based violence prevention models

<table>
<thead>
<tr>
<th>Violence Prevention Model</th>
<th>Core components</th>
<th>Intervention population</th>
<th>Primary outcome</th>
<th>Impacts</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cure violence</strong> (Skogan, 2008) and (Butts, Roman, Bostwick, &amp; Porter, 2015)</td>
<td>“Violence interrupters”. Outreach workers. Reinforcing that “violence is unacceptable”.</td>
<td>First trialled in Chicago. Also trialled in other US cities and outside of the US.</td>
<td>Gun-related crime</td>
<td>Mixed results. Reductions in violence in some communities, but no impact or worsening rates in other communities.</td>
<td>Concerns regarding the sustainability of provision, cost of provision and applicability to the United Kingdom.</td>
</tr>
<tr>
<td><strong>The Scottish Violence Reduction Unit</strong> (Goodall, MacFie, Conway, &amp; McMahon, 2018)</td>
<td>Primary prevention. Secondary prevention. Tertiary prevention. Enforcement and criminal justice. Attitudinal change.</td>
<td>Initially Glasgow, and then across the whole of Scotland.</td>
<td>Non-fatal sharp force injuries to hospital</td>
<td>Significant and sustained reduction in non-fatal sharp injuries between 2001 and 2013</td>
<td>No control comparison in study reviewed. However, more impact in the West of Scotland, which had higher intensity interventions. Unclear, which intervention (or combination of interventions) had most impact.</td>
</tr>
</tbody>
</table>
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Figure 2: Common features of multicomponent approaches to violence prevention (adapted from the CDC A Comprehensive Technical Package for the Prevention of Youth Violence and Associated Risk Behaviors (David-Ferdon, et al., 2016) in conjunction with other literature review findings)

Recommendations

This review has led to the following recommendations:

1. Establish the extent to which parenting programmes, good quality early years education, life and emotional skills training, bullying prevention programmes, and therapeutic approaches for young people at greatest risk of becoming involved in or already involved in violence:
   a. Are currently being provided across the WMVPA footprint.
   b. Have been evaluated and what the results of these evaluations suggest.
   c. May need to be implemented

2. Promote shared understanding regarding current local approaches to hotspot policing, community or problem-oriented policing, and restorative justice approaches and establish their effectiveness and ways in which these might be further developed.

3. Establish the root causes of local patterns of violence and select approaches that would address these causes. If these approaches have been identified by this review to have a limited evidence base, it will be important to:
   a. Undertake more systematic searching and reviewing of both formally published and grey literature, and existing resources such as the Crime Reduction Toolkit and EIF Guidebook, to establish the breadth of evidence regarding the effectiveness of these approaches (including consideration of interventions to address crimes other than violence, that are risk factors for violence and that are presented within the Crime Reduction Toolkit).
b. Pilot these approaches and ensure rigorous evaluation of such pilots prior to further roll out is even more important in this circumstance.

4. Continue horizon scanning for both formally published research and grey literature to identify newly emerging evidence. Coordination of these processes across multiple sectors and at local and national levels could be beneficial, both in terms avoiding duplication of efforts and in ensuring a rigorous approach to quality appraisal.

5. Develop a dedicated resource as part of an evolving Violence Reduction Unit that could expedite the delivery of many of these recommendations and in addition, have a vital role in providing ongoing continuity of shared understanding regarding the evolving evidence base both nationally and locally. This function would require sustained application of specialist Public Health skills.

Ultimately, this should lead to improved understanding of what are likely to be the most effective approaches to addressing this significant and challenging public health issue across the West Midlands metropolitan area.
Introduction

Background

Youth violence, gang-related violence and knife crime are highly significant public health issues locally, nationally and internationally (Home Office, 2018) and (World Health Organization, 2016). Nationally, there have been concerns regarding increases in rates of knife and fire arm related crimes since 2014 that are thought to be genuine rather than only secondary to changes in data recording (Home Office, 2018).

According to police data, violent crimes and violence with injury in the West Midlands Police (WMP) Force area have been steadily increasing since 2012/13. Furthermore, 27% of reported victims of violence with injury were aged 15-24, whilst this age group accounts for only 14% of the total population (West Midlands Police, 2018) and (Office for National Statistics, 2018a). Since 2014/15, police recorded rates of gun crime, knife crime and homicide have been increasing with the sharpest increase in knife crime (West Midlands Police, 2018). There has also been an increase in the number of hospital admissions following assault by sharp object during 2015/16 and 2016/17 (NHS Digital, 2018).

The West Midlands Violence Prevention Alliance (WMVPA) is a multi-agency collaboration co-led by the West Midlands Police and Public Health England West Midlands. Its purpose is to:

- work in line with World Health Organization principles to prevent violence across the West Midlands Police Force area (see Chapter 4)
- champion the importance of work that prevents violence and adversity within their own organisations and to networks and partners
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The rise in violent crimes has precipitated the urgent need to utilise available funding not only to scale up these existing programmes, where they are working well, but also to consider additional evidence-based approaches to issues not currently addressed by these programmes. The Violence Prevention Alliance’s work, along with the work of the Police and Crime Commissioner-sponsored Gangs and Violence Commission and the local authority-led “Preventing Violence for Vulnerable People” work will be further developed now as part of the new West Midlands Violence Reduction Unit. This will be a multiagency endeavour to be underpinned by Public Health principles and practice, to prevent and reduce violence in all its forms.

Aims

The aim of the literature review was to address the following question:

What violence prevention interventions are effective in reducing knife crime, youth violence or gang-related violence in the United Kingdom?

This review aimed to serve as an interim tool to inform the WMVPA strategic approach and the development of a violence reduction unit in the short-term, whilst longer-term more substantial evidence review processes are underway around the country. These longer-term processes will ultimately provide more systematic and comprehensive appraisal of evidence, enabling more definitive conclusions to be reached regarding the approaches that are most likely to be effective in reducing youth violence in the United Kingdom.
Review methodology

Articles were identified through two separate searches. Both searches focused on knife crime. The first was undertaken during September 2018 for a separate review and focussed on papers published between 2013 and 2018, limited to the United Kingdom population. This search also considered the epidemiology of knife crime. The second search was undertaken during March 2019 and aimed to identify articles published since September 2018 but with a focus on young people and not limited to the United Kingdom. Details of these searches are included within Appendix A.

Further articles were identified through the references of papers identified in these searches. In addition, prominent key reviews regarding violence or youth violence prevention were considered (Section 7.1), along with relevant national strategies. Some articles were also brought to the attention of the reviewer through routine sharing of evidence via violence prevention networks.

Quality appraisal methodology varied across the different reviews included. However, most involved structured frameworks or clear study design inclusion criteria (Early Intervention Foundation, 2018) (David-Ferdon, et al., 2016), (College of Policing, 2015), (World Health Organization, 2015) and (O’Connor & Waddell, 2015). In addition, relevant articles identified through the additional literature searches were critically appraised by the report author.

This rapid review sought to highlight key publications regarding violence prevention and more specifically, prevention of youth violence. As such, it is not a comprehensive overview of interventions to date from which to draw firm conclusions regarding the effectiveness of any specific interventions. It should be used to consider the range of interventions and intervention combinations trialled and some of the evidence associated with them, in order that more focused and detailed evidence reviews can be undertaken regarding any violence prevention interventions or models of particular interest. Review and feedback of an initial draft was sought from relevant national Public Health England experts, as well as from other Public Health specialists familiar with the violence prevention agenda. Findings were summarised into three sections:

- current national strategy
- youth violence risk factors
- violence prevention approaches
The World Health Organization (WHO) public health approach to violence prevention

The WHO public health approach to violence prevention is well known and often referred to. It involves the application of scientific principles to the investigation and management of violence (Figure 3).

**Figure 3- The public health approach to violence prevention (World Health Organization, n.d.)**

1. Surveillance
   - What is the problem?

2. Identify risk and protective factors
   - What are the causes?

3. Develop and evaluate interventions
   - What works and for whom?

4. Implementation
   - Scaling up effective policy & programmes

Current national strategy

There are a wide variety of national strategies relevant to addressing violence. Some of these include: the Serious Violence Strategy (Home Office, 2018); the Modern Crime Prevention Strategy (Home Office, 2016a); Ending Gang Violence and Exploitation; Ending Violence Against Women and Girls (Home Office, 2019); the Alcohol Strategy (Home Office, 2012) and the Drug strategy (Home Office, 2017). Amongst these strategies are some recurrent important core requirements (Table 4).
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

These include the need for:

- Prevention and early intervention
- Promotion of resilience
- Supporting those already affected at an individual and community level
- Combining prevention approaches with law enforcement

The Integrated Communities Strategy is also highly relevant (HM Government, 2018).
**Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence**

Table 4-Examples of current national strategy relating to serious violence

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Tackling County Lines and Misuse of Drugs</td>
<td>• Removing opportunities to commit crime</td>
<td>• Tackle county lines – the exploitation of vulnerable people by a hard core of gang members to sell drugs</td>
<td>• Preventing violence and abuse</td>
<td>• Take firm and fast action where immediate and universal change is needed</td>
<td>• Preventing people—particularly young people—from becoming drug users in the first place</td>
</tr>
<tr>
<td>• Early Intervention and Prevention</td>
<td>• Building character and resilience</td>
<td>• Protect vulnerable locations – places where vulnerable young people can be targeted, including pupil referral units and residential children’s care homes</td>
<td>• Provision of services</td>
<td>• Ensure that local areas are able to tackle local problems, reduce alcohol-fuelled violent crime on our streets, and tackle health inequalities.</td>
<td>• Targeting those criminals seeking to profit from others’ misery and restricting the availability of drugs</td>
</tr>
<tr>
<td>• Supporting communities and local partnerships</td>
<td>• Making the Criminal Justice System more effective at preventing crime</td>
<td>• Preventing crime by targeting criminal profits</td>
<td>• Partnership working</td>
<td>• Secure industry’s support in changing individual drinking behaviour</td>
<td>• Offering people with a drug dependence problem the best chance of recovery through support at every stage of their life</td>
</tr>
<tr>
<td>• Effective law enforcement and Criminal Justice Response</td>
<td>• Preventing county lines of criminal activity</td>
<td>• Tackling drugs as a driver of crime</td>
<td>• Pursuing perpetrators</td>
<td>• Supporting individuals to make informed choices about healthier and responsible drinking, so it is no longer considered acceptable to drink excessively</td>
<td>• Leading and driving action on a global scale</td>
</tr>
<tr>
<td></td>
<td>• Tackling alcohol as a driver of crime</td>
<td>• Tackling county lines – the exploitation of vulnerable people by a hard core of gang members to sell drugs</td>
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<tr>
<td></td>
<td>• Using data and technology to prevent crime</td>
<td>• Protect vulnerable locations – places where vulnerable young people can be targeted, including pupil referral units and residential children’s care homes</td>
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Youth violence and weapon carrying risk factors

Youth violence risk factors

The World Health Organization has identified a wide variety of risk factors associated with youth violence (Table 5) (World Health Organization, 2016).

Table 5- Risk factors associated with youth violence adapted from the World Health Organization youth violence fact sheet (World Health Organization, 2016)

<table>
<thead>
<tr>
<th>Risk factors within the individual</th>
<th>Risk factors within close relationships</th>
<th>Risk factors within the community and wider society</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention deficit, hyperactivity, conduct disorder, or other behavioural disorders</td>
<td>Poor monitoring and supervision of children by parents</td>
<td>Access to and misuse of alcohol</td>
</tr>
<tr>
<td>Involvement in crime</td>
<td>Harsh, lax or inconsistent parental disciplinary practices</td>
<td>Access to and misuse of firearms</td>
</tr>
<tr>
<td>Early involvement with Alcohol, drugs and tobacco</td>
<td>A low level of attachment between parents and children</td>
<td>Gangs and a local supply of illicit drugs</td>
</tr>
<tr>
<td>Low intelligence and educational achievement</td>
<td>Low parental involvement in children's activities</td>
<td>High income inequality</td>
</tr>
<tr>
<td>Low commitment to school and school failure</td>
<td>Parental substance abuse or criminality</td>
<td>Poverty</td>
</tr>
<tr>
<td>Unemployment</td>
<td>Parental depression</td>
<td>The quality of a country’s governance (its laws and the extent to which they are enforced, as well as policies for education and social protection)</td>
</tr>
<tr>
<td>Exposure to violence in the family</td>
<td>Low family income</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployment in the family</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Associating with delinquent peers and/or gang membership</td>
<td></td>
</tr>
</tbody>
</table>

Adverse Childhood Experiences

Adverse Childhood Experiences (ACEs) have been defined as “stressful experiences occurring during childhood that directly harm a child (eg sexual or physical abuse) or affect the environment in which they live (eg growing up in a house with domestic violence)” (Public Health Wales, 2015). The Welsh Adverse Childhood Experiences Study involving over 2000 participants aged between 18 and 69 years suggested that 53% of respondents had suffered no adverse childhood experiences. However, 14% had suffered four or more adverse childhood experiences. This group of individuals were approximately 15 times more likely to have perpetrated violence against another individual in the preceding 12 months than those with no adverse childhood experiences, and 14 times more likely to have been a victim of violence in the preceding 12 months (Public Health Wales, 2015).
Weapon carrying and gang involvement

There has been much interest in the reasons why people choose to carry knives. It has been proposed that it relates to fearing crime or the need for acquiring social status (Foster, 2013).

The Edinburgh Study of Youth Transitions and Crimes (ESYTC) of young people aged 12 to 17 years reported a very high response rate amongst participating schools (McVie, 2010). Findings from this study suggested that 30% of survey responders had carried a knife at some point between the ages of 12 and 17 and an additional 10% had carried another form of weapon. The peak age for knife carrying in this cohort was 14 years. Approximately 5% of people in the ESYTC stated that they were a “member of a gang with a strong identity” across all ages. The study reports that approximately a quarter of those in a gang at 13 were still in a gang by the age of 16. In addition, the study noted that those carrying knives were less likely to be living with both birth parents than non-knife carriers. It also noted that those involved in gangs were more likely to have come from deprived backgrounds (OR 2.22 aged 13 and OR 1.44 aged 16). This finding was not observed for knife carriers (McVie, 2010).

One qualitative study undertaken between 2011 and 2013 involving young people aged 9-19 years in London and Yorkshire highlighted that whilst some knife carriers were regularly offending, others were not. Participants expressed that “growing up”, change of identity, disengaging in street life and also “getting caught” with a knife all potentially influenced behaviour changes. Many participants had stopped offending in their late teens or early twenties (Traynor, 2016). A systematic review of qualitative research involving studies from both the United Kingdom and the United States considered the influences of gang membership on violent offending. Common themes identified included: “the role of the gang in reinforcing a community of belonging”; “gang related offending as a response to living within an oppressive context” for example, in creating a sense of purpose; and the “role of the gang as a provider in maintaining offending” (Boden, 2019).
Violence prevention approaches

Summary of violence prevention evidence reviews

There has been extensive research into violence and violence prevention over many years and new evidence continues to emerge rapidly. Furthermore, interventions that address the risk factors for violence may also have been undertaken with a different outcome as a primary focus, and as such may not be identified as a “violence prevention intervention”. Consequently, appraising evidence regarding interventions to prevent violence and summarising key findings into pragmatic recommendations with regards to the most effective interventions available is both a substantial and continuous task.

Many overviews of this research have been published. In 2010, the World Health Organization provided a summary of evidence regarding violence prevention from a global perspective (World Health Organization & Centre for Public Health, 2010). Protecting people Promoting health: A public health approach to violence prevention, published in 2012, provided a comprehensive overview of approaches to violence prevention from a United Kingdom perspective (Bellis M. A., Hughes, Perkins, & Bennett, 2012). More recently the follow reviews have been published:

- Preventing youth violence: an overview of the evidence (World Health Organization, 2015)
- The Crime Reduction Toolkit, which, for this review, was filtered to specifically consider interventions to address violence rather than to consider “all crimes”(College of Policing, 2015)
- What works to prevent gang involvement, youth violence and crime with a focus on the United Kingdom, published by the Early Intervention Foundation (EIF) (O’Connor & Waddell, 2015)
- A Comprehensive Technical Package for the Prevention of Youth Violence and Associated Risk Behaviors published by the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (David-Ferdon, et al., 2016)
- A review of evidence that was undertaken by the Home Office to inform the Serious Violence Strategy (Home Office, 2018)

Most of these resources have published their search methodology and approach to quality appraisal and have considered a broad range of interventions to address either youth violence or risk factors associated with youth violence. Due to the limited time frame for the review, the Crime Reduction Toolkit was filtered to focus specifically on
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

violence as an outcome due to the breadth of interventions included that impacted on “all crimes”. These resources all considered international evidence (Table 6).

Table 6-Summary of the methodologies of reviews examined

<table>
<thead>
<tr>
<th>Review</th>
<th>Population</th>
<th>Outcomes</th>
<th>Documented search and quality appraisal methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protecting people Promoting health: A public health approach to violence prevention (Bellis, Hughes, Perkins, &amp; Bennett, 2012)</td>
<td>All ages Global predominantly developed</td>
<td>Violence Risk factors</td>
<td>Not included</td>
</tr>
<tr>
<td>A Comprehensive Technical Package (David-Ferdon, et al., 2016)</td>
<td>10-24 yr olds Global</td>
<td>Violence Risk/protective factors</td>
<td>Both</td>
</tr>
<tr>
<td>Serious Violence Strategy (Home Office, 2018)</td>
<td>&lt;21 yr olds Global</td>
<td>Aggressive behaviour</td>
<td>Quality appraisal</td>
</tr>
</tbody>
</table>

In addition, the EIF have produced a guidebook that incorporates the best available evidence for specific programmes. For the purposes of this review, this resource was filtered to identify interventions that have been shown to have a positive impact specifically on preventing crime, violence and antisocial behaviour, rather than to consider broader risk factors as outcomes. In addition, with this resource it is possible identify to which programmes have been trialled in the United Kingdom and where there is good quality evidence of effectiveness of programmes in United Kingdom-based populations (Early Intervention Foundation, 2017). Although the guidebook outlines a clear methodology with regards to quality assessment, it acknowledges that it is not a complete list of interventions and that the interventions covered would be intermittently updated (Early Intervention Foundation, 2019a) and (Early Intervention Foundation, 2018). Furthermore, this resource only considers individual or small group-based early interventions, rather than those based at a community or environment level (Early Intervention Foundation, 2017).

The CDC Technical Package summarised approaches to youth violence using a clear and logical framework involving six key strategies that if used in combination, are intended to comprehensively reduce multiple forms of youth violence for the long term (David-Ferdon, et al., 2016). These can be summarised in terms of:
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

Primary prevention approaches to avoid involvement in violence in individuals not already involved in violence and including:

- promoting family environments that can support healthy development
- providing quality education in early life
- strengthening young people’s skills
- connecting young people to caring adults and activities
- creating protective environments (David-Ferdon, et al., 2016)

Secondary and tertiary prevention approaches in those already involved in violence, including:

- reducing harm from violence
- preventing future risk (David-Ferdon, et al., 2016)

The proceeding chapters consider a wide variety of interventions according to this framework.
Primary prevention

Primary prevention initiatives aim to avoid involvement in violence in individuals not already involved. It can consist of universal approaches that cover entire populations, or targeted approaches that focus on those individuals at greatest risk. The EIF rapid review summarised key principles that appeared to be associated with success both in terms of universal and targeted violence prevention interventions (Table 7).

Table 7-Key principles for potentially effective violence prevention programmes (O’Connor & Waddell, 2015)

<table>
<thead>
<tr>
<th>Universal programmes</th>
<th>Targeted programmes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• “Preventative and positive youth development goals” that promote protective factors, skills, attitudes and behaviours</td>
<td>• “Preventative and positive goals for young people and their parents/families” with more focus on family-level risk factors</td>
</tr>
<tr>
<td>• School and parent engagement often in combination</td>
<td>• School and parent engagement with more focus on active parent engagement</td>
</tr>
<tr>
<td>• Interactive group-based sessions</td>
<td>• Multiple formats of intervention including one-to-one, small group and larger groups</td>
</tr>
<tr>
<td>• “Trained facilitators, who regularly work with young people and/or families”</td>
<td>• “Interactive and real-life examples”</td>
</tr>
<tr>
<td>• “Well-specified goals, with structured and/or manualised content”</td>
<td>• “Well-specified goals with structured content and/or phases.”</td>
</tr>
<tr>
<td>• “Regular and/or frequent contact”</td>
<td>• “Facilitators who are trained and/or have a good level of education”</td>
</tr>
<tr>
<td></td>
<td>• “Regular and/or frequent contact”</td>
</tr>
<tr>
<td></td>
<td>• “Implementation fidelity”</td>
</tr>
<tr>
<td></td>
<td>• “One-to-one adult-to-youth mentoring”</td>
</tr>
</tbody>
</table>

The Serious Violence Strategy highlighted one systematic review that suggested targeted programmes were more effective than universal programmes in violence reduction (Home Office, 2018). Although there is a need to target those at highest risk of perpetrating violence, it is important to consider the “Prevention Paradox”, and that by focussing on this group, the opportunity to prevent more violence across a much larger population could be missed (Rose, 1985). The Serious Violence Strategy ultimately proposed combining universal and targeted approaches to address serious violence. It also concluded that there was more evidence for impact in interventions focussing on children after the early years, but acknowledged the challenge of demonstrating long term impact following interventions in the early years (Home Office, 2018).

Promoting family environments to support healthy development

Across all of the major reviews of global evidence, promoting supportive family environments was identified to be one of the key approaches with the most promising evidence base (Table 8). Whilst parenting programmes were more consistently identified to have a promising evidence base, the CDC Technical Package concluded the evidence base was mixed with regards to home visiting.
Table 8-Summary of review conclusions regarding the evidence base for approaches to promote supportive family environments

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating a supportive family environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0-5 age group)</td>
</tr>
<tr>
<td>Parenting programmes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home visiting (Health visitors only in Crime Reduction Toolkit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key:
- WHO Review-most promising
- Crime Reduction Toolkit-“works”
- EIF What Works Rapid Review-most promising
- CDC Technical Package-most promising/best evidence
- Serious violence strategy-Best evidence/most successful with regards to impact on aggressive behaviour
- WHO Review-Unclear due to limited evidence according to WHO 2015, Crime Reduction Toolkit-“promising”
- EIF What Works Rapid Review-promising but limited evidence
- CDC Technical Package-promising/emerging evidence
- Serious violence strategy-limited evidence of direct impact on aggressive behaviour
- Evidence suggests mixed effects
- Evidence shows not effective or risk of harm
- Not included

Programmes have been delivered universally whilst other programmes have been more targeted. In addition, interventions have focussed on varying ages of child. Costs have also varied.

Home visiting programmes
Home visiting programmes tend to provide information and support to families in the home setting regarding child health and development and care. These programmes have been delivered by a wide variety of professionals. Some programmes focus on families from deprived backgrounds or first-time mothers. Some programmes commence during pregnancy, whilst others commence after birth. Some programmes continue until children are of school age (David-Ferdon, et al., 2016).

In England, the Healthy Child Programme is a universal programme that commences during pregnancy and supports children until the age of 18 years. The first five years are led by health
visitors with support from midwives and the wider health professional community. Although the programme is universal, it provides greater intensity support to those with greater need (Department of Health, 2009). It is therefore important to consider the impact of additional or enhanced home visitation programmes in the context of this usual provision.

Evidence suggests of the magnitude of impact of these programmes is mixed. In the United States, the **Nurse Family Partnership** was demonstrated to result in fewer behaviour problems, and by the age of 15 years, fewer arrests and convictions in those participating in the programme compared to those that did not (David-Ferdon, et al., 2016). The United Kingdom version of the programme, the **Family Nurse Partnership** has been trialled. This programme has focused on support to first-time mothers aged 19 years or younger. However, robust evaluation did not find any significant benefit over the first two years of the child’s life with the programme compared to usual provision (through the **Healthy Child Programme** and social support) and longer-term results are still awaited (Robling, et al., 2016). A study considering the impact of the **Family Nurse Partnership** between the ages of two and six years is due to be reported in the near future (Cardiff University Centre for Trials Research, n.d.).

Conversely, **The New Forest Parenting Programme** and **Let’s Play in Tandem** have been identified by the EIF guidebook as home visiting programmes with good quality evidence of effectiveness in the United Kingdom (Early Intervention Foundation, 2017) (Table 9).

Table 9-EIF Guidebook examples of home visiting interventions to support the family environment with good quality evidence of reducing crime, violence or antisocial behaviour in United Kingdom-based populations*(Early Intervention Foundation, 2017)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Evidence rating for child outcomes**</th>
<th>Cost rating**</th>
<th>Age group (years)</th>
<th>Targeted or universal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The New Forest Parenting Programme</td>
<td>3+</td>
<td>3</td>
<td>3-11 Moderate-severe ADHD</td>
<td>Targeted</td>
</tr>
<tr>
<td>Let’s Play in Tandem</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>Targeted</td>
</tr>
</tbody>
</table>

*Interventions where the evidence rating within the EIF guidebook regarding the best available evidence refers to evidence from the United Kingdom (Appendices B and C)

**Evidence and cost rating methodology is described in Appendix B. An evidence rating of 4 describes the highest quality evidence, whilst a cost rating of 4 describes the highest cost intervention per unit (Early Intervention Foundation, 2019b)

**Parenting programmes and enhancing family relationships**

Programmes focussed on parenting and promoting positive family relationships have been demonstrated, by multiple systematic reviews to have positive impacts on perpetration of violence, as well as on reducing risk factors for violence and strengthening protective factors. **Incredible Years** and **Triple P** are examples of such programmes (David-Ferdon, et al., 2016) and (Bellis, Hughes, Perkins, & Bennett, 2012). Both of these programmes, have been implemented in England and have been shown to have a positive impact on child behaviour and parenting (Bellis, Hughes, Perkins, & Bennett, 2012). The EIF rapid review identified a systematic review which found that as well as impacting on behaviour, there was some evidence to suggest that these programmes also impacted on delinquency in the longer term.
Although this particular systematic review focussed predominantly on studies from the United States, a few studies based in the United Kingdom were included (O’Connor & Waddell, 2015). Incredible Years Preschool, Incredible Years School Age Basic and Empowering parents, empowering communities have all been identified by the EIF guidebook as community based parenting programmes with good quality evidence of effectiveness in the United Kingdom (Early Intervention Foundation, 2017) (Table 10).

Table 10- EIF Guidebook examples of community-based parenting programmes to support the family environment with good quality evidence of reducing crime, violence or antisocial behaviour in United Kingdom-based populations*(Early Intervention Foundation, 2017)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Evidence rating for child outcomes**</th>
<th>Cost rating**</th>
<th>Age group (years)</th>
<th>Targeted or universal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incredible Years Preschool</td>
<td>4+</td>
<td>2</td>
<td>3-6</td>
<td>Targeted</td>
</tr>
<tr>
<td>Incredible Years School Age Basic</td>
<td>3+</td>
<td>2</td>
<td>6-12</td>
<td>Targeted</td>
</tr>
<tr>
<td>Empowering parents, empowering communities</td>
<td>3</td>
<td>1</td>
<td>2-11</td>
<td>Targeted</td>
</tr>
</tbody>
</table>

*Interventions where the evidence rating within the EIF guidebook regarding the best available evidence refers to evidence from the United Kingdom (Appendices B and C)

**Evidence and cost rating methodology is described in Appendix B. An evidence rating of 4 describes the highest quality evidence, whilst a cost rating of 4 describes the highest cost intervention per unit (Early Intervention Foundation, 2019b)

Good quality early education

Good quality early education has also been acknowledged to be effective in addressing violence prevention risk factors (Table 11). Incredible Years Teacher Classroom Management is a programme included within the EIF guidebook that has been appraised to be effective in United Kingdom populations, in pre-school and primary school aged children (Table 12).

Table 11-Summary of review conclusions regarding the evidence base for approaches to promote good quality early education
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

Table 12- EIF Guidebook examples of school-based interventions to support to promote good quality early education with good quality evidence of reducing crime, violence or antisocial behaviour in United Kingdom-based populations (Early Intervention Foundation, 2017)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Evidence rating**</th>
<th>Cost rating**</th>
<th>Age group (years)</th>
<th>Targeted or universal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incredible Years Teacher Classroom Management</td>
<td>3+</td>
<td>1</td>
<td>Preschool and primary school</td>
<td>Targeted</td>
</tr>
</tbody>
</table>

*Interventions where the evidence rating within the EIF guidebook regarding the best available evidence refers to evidence from the United Kingdom (Appendices B and C)

**Evidence and cost rating methodology is described in Appendix B. An evidence rating of 4 describes the highest quality evidence, whilst a cost rating of 4 describes the highest cost intervention per unit (Early Intervention Foundation, 2019b)

**Strengthening skills in young people and connecting youth with caring adults**

Multiple reviews identified strengthening skills in young people and connecting youth with caring adults to be promising approaches, particularly with regards to promoting development of life and social skills, bullying prevention programmes, and also with regards to therapeutic approaches in young people particularly at risk of becoming involved in violence. However, with regards to other specific approaches there appeared to be a consensus that the evidence base was more limited or that there were mixed results (Table 13).
Table 13- Summary of review conclusions regarding the evidence base for approaches to strengthen skills in young people and connect youth to caring adults

<table>
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<tbody>
<tr>
<td>Strengthening skills in young people and connecting youth with caring adults (school based interventions in Serious Violence Strategy)</td>
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<tr>
<td>Life and social skills development</td>
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<tr>
<td>Bullying prevention programmes</td>
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<tr>
<td>Relationship violence education (Dating violence prevention programme in WHO review)</td>
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<tr>
<td>Academic enrichment programmes</td>
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<tr>
<td>Financial incentives for adolescents to attend school</td>
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<td></td>
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<tr>
<td>Afterschool and other structured leisure time activities (Sports programmes for EIF what works)</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mentoring (mentoring in high risk youth in WHO review)</td>
<td></td>
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<tr>
<td>Peer mediation</td>
<td></td>
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<tr>
<td>Therapeutic approaches for young people at risk of being involved in violence (Family therapy in EIF what works, multisystemic therapy in Serious Violence Strategy)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Vocational training for young people at risk of being involved in violence</td>
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<tr>
<td>Boot camps</td>
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<td></td>
<td></td>
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<tr>
<td>Prison visits</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Key:
- **WHO Review-most promising**
- **Crime Reduction Toolkit-"works"**
- **EIF What Works Rapid Review-most promising**
- **CDC Technical Package-most promising/best evidence**
- **Serious violence strategy-Best evidence/most successful with regards to impact on aggressive behaviour**
- **WHO Review-Unclear due to limited evidence according to WHO 2015, Crime Reduction Toolkit-"promising"**
- **EIF What Works Rapid Review-promising but limited evidence**
- **CDC Technical Package-promising/emerging evidence**
- **Serious violence strategy-limited evidence of direct impact on aggressive behaviour**
- **Evidence suggests mixed effects**
- **Evidence shows not effective or risk of harm**
- **Not included**
Social and emotional skills strengthening programmes
Skills strengthening programmes focus on supporting children and young people to improve upon emotional and interpersonal skills, such as emotional awareness and regulation, empathy, team working and managing conflict (David-Ferdon, et al., 2016) and (O’Connor & Waddell, 2015). These approaches often address awareness of violence and attitudes regarding violence (Farrington, Gaffney, Losel, & Ttofi, 2017) and (David-Ferdon, et al., 2016).

The Good Behaviour Game, for example, has been associated with lower levels of aggression, as well as lower levels of antisocial behaviour and violent crime in the longer term in male youth when compared to those in “alternative intervention conditions”. There was also evidence of reduced alcohol misuse, smoking, and suicidal ideation. In addition, the PATHS programme has been associated with a broad range positive impacts in primary school-aged children in terms of social and emotional wellbeing, as well as improved academic performance in maths and literacy (David-Ferdon, et al., 2016). The EIF Guidebook identified Incredible Years Teacher Classroom Management to be supported by good quality evidence from the United Kingdom (Early Intervention Foundation, 2017) (Table 14). Varied conclusions were reached regarding the quality of evidence for relationship violence awareness education across the different reviews examined, however, this review did not focus on intimate partner violence. It may be that more evidence exists of effectiveness of this intervention, or that positive impacts are experienced in later life rather than during youth (Table 13).

Table 14-EIF Guidebook examples of interventions to support to promote skills in young people with good quality evidence of reducing crime, violence or antisocial behaviour in United Kingdom-based populations (Early Intervention Foundation, 2017)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Evidence rating**</th>
<th>Cost rating**</th>
<th>Age group (years)</th>
<th>Targeted or universal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incredible Years Teacher Classroom Management</td>
<td>3+</td>
<td>1</td>
<td>Preschool and primary school</td>
<td>Universal</td>
</tr>
</tbody>
</table>

*Interventions where the evidence rating within the EIF guidebook regarding the best available evidence refers to evidence from the United Kingdom (Appendices B and C)

**Evidence and cost rating methodology is described in Appendix B. An evidence rating of 4 describes the highest quality evidence, whilst a cost rating of 4 describes the highest cost intervention per unit (Early Intervention Foundation, 2019b)

Bullying prevention
Bullying has been recognised as a form of violence and a risk factor for other forms of violence (World Health Organization, 2015). School-wide bullying prevention programmes, such as STR and the Olweus Programme have been associated with reduced rates of bullying (David-Ferdon, et al., 2016) and (Bellis, Hughes, Perkins, & Bennett, 2012). Evaluation of the STR programme against controls also detected significant improvements in bystander behaviour (David-Ferdon, et al., 2016). There is qualitative evidence regarding the potential positive impact of UNICEF United Kingdom’s Rights Respecting Schools Award (Bellis, Hughes, Perkins, & Bennett, 2012).
School-based mentoring

Mentoring has become a popular approach in the United Kingdom, however, evidence of the effectiveness of this approach is predominantly based upon programmes in the United States (Bellis, Hughes, Perkins, & Bennett, 2012). The Big Brothers Big Sisters of America programme in the United States involves one-to-one mentoring in school and the community. At 18 months, compared to controls, youth in this programme had missed half as many days of school, were 46% less likely to have started taking illegal drugs and 27% less likely to have started to drink alcohol. They were also 32% less likely to be involved in physical fights, more likely to perform better academically and more likely to have better relationships with parents and teachers. Greater impacts were seen in girls than boys (David-Ferdon, et al., 2016).

The Mentors in Violence Prevention (MVP) programme was first developed in the United States within sports teams. It was designed to support bystanders in interrupting and discouraging abusive behaviours by giving them approaches to intervene through group discussion of scenarios (from the MVP “playbook”) and role play. A key component of the programme is discussion facilitation by a peer mentor: “an individual(s) older or more senior from the same peer group”. Previous analysis in the United States has suggested that pupils in the MVP programme were significantly more likely to “perceive the range of violence behaviors as wrong, and were more likely to intervene in more serious instance of violence than non-MVP school pupils” (Williams & Neville, 2017).

The MVP programme was first piloted in Scotland in 2011. A qualitative evaluation of the programme was undertaken in three high schools in Scotland (one on the east coast and two on the west coast) that experienced the MVP programme during 2012/13. Mentees were aged from 11-14 and mentors were aged from 15-18 years old (Williams & Neville, 2017). It concluded that the peer-learning model had been felt to be particularly useful in engaging mentees and promoting support networks. Furthermore, all three evaluation groups expressed positive attitudinal and behavioural change regarding gender-based violence, particularly with regards to confidence in intervening. However, not every individual mentee felt that behaviour had positively changed (Williams & Neville, 2017). Furthermore, it is important to note that this qualitative evaluation is not claiming to be representative of all those participating in the MVP in Scotland but more to consider a range of experiences. There is also a risk of social acceptability bias amongst mentors and mentees, who might feel the need to express “expected views” to the adult male researchers facilitating the interviews and focus groups.

Headstart is another programme that has been implemented across the United Kingdom. This uses trauma-informed and child mental health-informed approaches to detect early signs of mental health problems and to recognise adverse childhood experiences or developmental issues. This programme also involves the provision of access to an “emotionally available adult” to strengthen resilience in children. Staff have reported to have increased confidence in managing the issues covered (Big Lottery Fund, 2018).
School-based awareness raising interventions

Medics Against Violence is a charity based in Scotland. Through this charity, medics visit schools to discuss violence and the medical consequences of violence. A similar programme is in operation in London and one has been trialled in Liverpool. In Liverpool, this involved an emergency nurse clinician delivering a two-hour assembly to 11-16 year olds and their teachers in four secondary schools across the city. The post-event questionnaires had high response rates and positive feedback from both students and teachers. 76% of students reported it had “taught them things they didn’t know before”. In addition, 77% of students reported it had led them to “rethink whether they would carry a knife”, and 72% said it made them “rethink whether they would use a knife” (England & Jackson, 2013).

Northampton Borough Council has also implemented an awareness raising programme regarding knife crime and weapon carrying, and another programme regarding Child Sexual Exploitation. The City of Bradford Council has reported some success in raising awareness of grooming and sexual exploitation with a theatre production called Somebody’s Sister, Somebody’s Daughter. Evaluation of this approach has suggested improved understanding regarding exploitation and abuse in 82% of participants and the production is also believed to have led to some disclosures. In addition, there has been an increase in referrals to the CSE multi-agency hub (Local Government Association, 2019). Other examples include the Ben Kinsella Trust and St Giles Trust. The latter arranges awareness raising sessions delivered by ex-offenders (Big Lottery Fund, 2018).

After-school approaches

There have been mixed results with regards to after-school approaches. One approach reported to have been successful in the United States is the Los Angeles Better Educated Students for Tomorrow programme, which found that in students that attended for at least ten days a month and had significant contact with adults, there was improved academic performance and lower rates of arrests for violence and crime than in the control group. Another programme, After School Matters, offered apprenticeship experiences to high school students in Chicago in a variety of different subject fields including science, technology, sports, arts, music and communication. A randomized controlled trial suggested this intervention had multiple positive impacts, including on self-regulation and reduced gang involvement. This trial was undertaken in ten schools based in ethnically diverse and lower income areas (David-Ferdon, et al., 2016). There is some evidence in the United Kingdom to suggest that targeted interventions to promote academic enrichment by supporting study and extracurricular activities outside of school might be associated with a reduction in risk factors for violence (Bellis, Hughes, Perkins, & Bennett, 2012). The EIF rapid review reported some positive results from the evaluation of eleven sports-based programmes trialled in London aimed at preventing youth crime. However, those results were based on small sample sizes and lacked any comparison with control groups. It noted that less than half of programmes reported negative impacts. Challenges to implementation included lack of appropriate community space or territorial tensions (O’Connor & Waddell, 2015).
The World Health Organization noted that a wide variety of after school programmes have been trialled. It cited a review (of programmes in the United States) that suggested that programmes with academic and social skill development components had the greatest impact. It noted barriers to include the cost of equipment, supervision or transportation, and that there was a risk of not reaching the communities most in need. It also suggested that it was important not to label participants as “at risk” due to the potential to stigmatize the individuals involved (World Health Organization, 2015).

**StreetChance** has been implemented across multiple cities in the United Kingdom, including in Birmingham, London, Manchester and Bristol. This intervention involved “cricket-based coaching and structured competitive sports opportunities” and utilised multiple community venues. According to the evaluation, the programme tended to take place in more deprived locations and on weekday evenings. On some occasions, police participated in the intervention. An apprenticeship programme ran in parallel to train young peoples as coaches (Pritchard & Svistak, 2014). The evaluation reviewed was based on a survey with a 25% response rate, as such, it is important to consider responder bias and the potential risk of systematically different views in those that did not respond. The survey did not attempt to demonstrate impact with regards to violent crimes. Nevertheless, the survey confirmed that in most areas, the programme had engaged with a proportion of youths that were at high risk of being involved in gangs (up to 30% of responders), and that, in many cases these high-risk individuals were able to make friends with peers and coaches outside of their existing networks. The report also noted that approximately two thirds of participants had attended StreetChance for over a year, demonstrating a potential for sustained engagement with the individuals involved (Pritchard & Svistak, 2014).

**Wigan Youth Zone** has provided a safe environment for young people at risk and connecting them with caring adults. It has been reported that within the first few weeks of opening, 23 social care referrals had been made. Another example of a diversionary activity is **Fight for Peace**. This programme encourages young people to engage with the gym and to become involved in martial arts and boxing to build self-esteem and “channel aggression”. This programme is being delivered in England and Northern Ireland, as well as internationally. It has been reported that this programme has been associated with reduced numbers of offences in participants. **StreetGames**, the Battersea Arts Centre project and **London Football Journeys** are other examples of diversionary activities (StreetGames, n.d.) and (Big Lottery Fund, 2018).

**Creating protective community environments**

The importance of creating protective physical and social community environments was highlighted in most of the reviews examined. The **WHO review** and the **Crime Reduction Toolkit** noted changes to firearms policy, community or problem-oriented policing and hotspot policing to have some of the most promising evidence. Spatial modification and urban upgrading and changes to alcohol policy were also identified to have promising evidence according to the
WHO review and some limited evidence with regards to the CDC Technical Package, whilst the Crime Reduction Toolkit specifically noted improved street lighting to have evidence of benefit (Table 15).

Hotspot policing and community or problem-oriented policing
Hotspot policing and community or problem-oriented policing can be used in combination. An example of a hotspot policing model is the Cardiff Violence Prevention Programme included in the multi-component section of the report. Community or problem-oriented policing focuses on building a relationship with the community and tailoring responses according to need (World Health Organization, 2015).

Table 15- Summary of review conclusions regarding the evidence base for to create protective community environments

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<td>Creating protective community environments</td>
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<td>Limited evidence presented</td>
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<td>Reducing access to and the harmful use of alcohol</td>
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<td>Alcohol pricing</td>
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<td>Limiting alcohol sales</td>
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<td>Drug control programmes</td>
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<td>Reducing access to and misuse of firearms (Firearms laws in Crime Reduction Toolkit)</td>
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<td>Spatial modification and urban upgrading</td>
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<td>Poverty de-concentration</td>
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<td>Hotspots policing</td>
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<td>Changing community norms</td>
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<td>Community- and problem-orientated policing (Problem-oriented policing in the Crime Reduction Toolkit)</td>
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<td>Hospital-community partnerships for youth at risk of being involved in violence</td>
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<td>Youth curfews</td>
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Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

Changes to physical environments

There is evidence to suggest that alterations to physical environments can impact on rates of violent crime, for example, improving lighting, access to buildings and public spaces, increasing security, remediating vacant lots, creating green space or organising community events (David-Ferdon, et al., 2016) and (Bellis, Hughes, Perkins, & Bennett, 2012). A Business Improvement District approach in Los Angeles that involved partnership working between the public and private sector to improve commerce, for example, through street cleaning, improved security and “beautification” was reported to have led to an 8% reduction in violent crime compared to control districts. Furthermore, there has been a systematic review of Crime Prevention Through Environmental Design (CPTED), which suggested that communities following some of these principles have seen reductions in violent crimes as well as an improvement in physical health (David-Ferdon, et al., 2016).

Following the riots of 2011 in one borough in London, the shutters of local shops that had been damaged through the riots were painted with the faces of local babies ("Babies of the Borough") with the aim of evoking a feeling of caring and reducing antisocial behaviour. Following this, there was a reduction in overall antisocial behaviour in this borough by approximately 24%. No control comparisons were included within the report reviewed. However, there was also some positive qualitative evidence to suggest this approach may have improved social cohesion (Local Government Association, 2017).

Interventions to reduce alcohol-related harm

Alcohol consumption has been associated with violence (Public Health England, 2016). According to data from the Crime Survey for England and Wales, approximately 40% of crimes were reported to be alcohol-related during the year ending March 2017 (Office for National Statistics, 2018b). Areas with more concentrated numbers of pubs and clubs have been associated with higher levels of public disorder and violence. Use of glass and bottles has also been associated with alcohol-related assaults (Public Health England, 2016). In addition, alcohol has been associated with intimate partner violence and adverse childhood experiences.
Alcohol-related violence is more likely to occur on weekend evenings than at other times (Public Health England, 2016).

A rigorous evidence review undertaken by Public Health England provided an overview of key approaches to reducing alcohol-related harm. This concluded that increasing taxation was a cost-effective approach to improving health and that minimum prices effectively reduced harm. With regards to crime, one meta-analysis estimated that doubling alcohol tax would lead to a 2.2% reduction in violent episodes and in British Columbia, Canada, a 10% rise in minimum prices of alcohol was associated with a 9.4% reduction in crime against another person (95% CI:±3.8%) between 2002 and 2010 (Public Health England, 2016).

Complete advertising bans were found to be cost-effective in improving health. There was also evidence to suggest that increasing opening hours by two or more hours can increase alcohol-related harm. Furthermore, in Australia, there was evidence that closing restrictions on fourteen pubs, not allowing entrance after 1am led to a reduction in police recorded assaults compared to a control area. Reducing the density of outlets that sell alcohol was concluded to potentially reduce social disorder, whilst reducing hours of sales might reduce alcohol-related harm (Public Health England, 2016).

Multicomponent community programmes were found to be associated with “small reductions in acute harms” that could be potentially cost-effective. Server training and liability have also demonstrated small impacts on harms relating to violence. There was some evidence of reduced violent injuries from replacing glassware with safer alternatives, however, the number of observations regarding this was small. There was limited evidence regarding voluntary removals of the sale of alcohol that is high strength, although small reductions were noted in anti-social behaviour and alcohol-related crime. There was some low to moderate strength evidence that police enforcement approaches might be associated with reductions in acute harms. (Public Health England, 2016).

**Changing social norms**

Bellis et al. highlighted the potential for mass media to raise awareness and challenge social norms regarding violence. However, they also acknowledged the challenge of the evaluating the impact of mass media campaigns on violent behaviour and therefore the limited evidence regarding them (Bellis, Hughes, Perkins, & Bennett, 2012). The *CDC Technical Package* also acknowledged some evidence to support this approach (David-Ferdon, et al., 2016).
Secondary and tertiary prevention: intervening to lessen harms and prevent future risk in those that have already experienced violence
(Secondary and tertiary prevention have been grouped together given the overlap between these approaches.)

Individual-based approaches

The strongest evidence base with regards to individual-based secondary and tertiary interventions across multiple reviews relates to therapeutic approaches, including Multisystemic Therapy (MST) and cognitive behavioural therapy for offenders (Table 16). Other examples include Functional Family Therapy (FFT), and Multidimensional Treatment Foster Care (MTFC). These are all forms of intensive therapy for perpetrators of violence. MST involves engagement across entire social networks of “chronically delinquent and violent youth” and has been shown to have positive long-term impact (compared to controls) on offending behaviour, as well as positive impacts on mental health, substance misuse, gang involvement, parenting practices and criminal behaviour in siblings (David-Ferdon, et al., 2016) and (Bellis, Hughes, Perkins, & Bennett, 2012). According to the EIF Guidebook, MST has the strongest evidence-base with regards to the United Kingdom (Table 17). However, the EIF rapid review warned that adherence to the original model of the intervention might be important to optimise effectiveness, and even to avoid harm and that there was evidence of “usual care” providing better outcomes than the intervention in some cases (O’Connor & Waddell, 2015).

Cognitive Behavioural Therapy (for example, Trauma-Focused Cognitive Behavioural Therapy and Cognitive Behavioural Therapy for Trauma in Schools) following exposure to violence has been associated with reduction in depression, Post-Traumatic Stress Disorder and problems with behaviour. Cognitive Behavioural Therapy for Trauma in Schools has been trialled in both school and community settings (David-Ferdon, et al., 2016).
Table 16- Summary of review conclusions regarding the evidence base for individual-based approaches to lessen harm or prevent future risk in those that have already experienced violence

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<td>Individual-based interventions</td>
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<td>Restorative justice</td>
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<td>“Therapeutic approaches” in general in WHO 2015 (Family therapy in EIF What Works, multisystemic therapy in Serious Violence Strategy)</td>
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<td>Trauma-focussed cognitive behavioural therapy</td>
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<td>Cognitive Behavioural Therapy for offenders</td>
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<td>Therapeutic Foster Care</td>
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<td>Mediation between offender and victim</td>
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<td>Vocational training (Skills building in Serious Violence Strategy)</td>
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<td>Mentoring</td>
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<td>A second visit to the home of domestic abuse victims (24 hours- 14 days after initial response)</td>
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<td>“Scared Straight” programmes</td>
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<td>Trying youth as adults</td>
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**Key**
- WHO Review-most promising
- Crime Reduction Toolkit-“works”
- EIF What Works Rapid Review-most promising
- CDC Technical Package-most promising/best evidence
- Serious violence strategy-Best evidence/most successful with regards to impact on aggressive behaviour
- WHO Review-Unclear due to limited evidence according to WHO 2015,
- Crime Reduction Toolkit-“promising”
- EIF What Works Rapid Review-promising but limited evidence
- CDC Technical Package-promising/emerging evidence
- Serious violence strategy-limited evidence of direct impact on aggressive behaviour
- Evidence suggests mixed effects
- Evidence shows not effective or risk of harm
- Not included
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

Table 17- EIF Guidebook examples of therapeutic interventions to lessen harm and reducing future crime, violence or antisocial behaviour in United Kingdom-based populations (Early Intervention Foundation, 2017)

<table>
<thead>
<tr>
<th>Programme</th>
<th>Evidence rating</th>
<th>Cost rating</th>
<th>Age group (years)</th>
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<tbody>
<tr>
<td>Multisystemic Therapy</td>
<td>4+ (mixed findings)</td>
<td>5</td>
<td>12-17</td>
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*Interventions where the evidence rating within the EIF guidebook regarding the best available evidence refers to evidence from the United Kingdom (Appendices B and C)

**Evidence and cost rating methodology is described in Appendix B. An evidence rating of 4 describes the highest quality evidence, whilst a cost rating of 4 describes the highest cost intervention per unit (Early Intervention Foundation, 2019b)

Restorative Justice

Restorative justice involves face to face meeting between the offender and victim to understand the consequences of the crimes and to discuss ways of repairing the damage. The Crime Reduction Toolkit concluded there to be good quality evidence that this approach reduced violent crimes based on two systematic reviews (College of Policing, 2015). The Serious Violence Strategy also advocated this approach (Home Office, 2018).

Mentoring

Some studies have demonstrated reductions in aggression and risk of delinquency through mentoring those at risk or that have already delinquent behaviour. However, the EIF rapid review noted that studies of higher quality did not demonstrate this impact. Furthermore, it noted that positive impacts were not sustained once the intervention had ceased and some studies suggested a negative impact (O'Connor & Waddell, 2015).

Community-based approaches

Community approaches have also been explored with hotspot policing and community or problem-oriented policing having some of the most promising evidence according to two reviews (World Health Organization, 2015) and (College of Policing, n.d.). Gang and street violence prevention programmes were also concluded to have some limited evidence of effectiveness according to multiple reviews (Table 18).

Gang-focussed approaches

Glasgow developed its Community Initiative to Reduce Violence through adaption of the Cincinnati Initiative to Reduce Violence model. The intervention ran from 2008-2011. It involved the identification of gang-related youths in specific neighbourhoods in Glasgow being identified through police intelligence systems. These individuals were then invited to attend “self-referral sessions” at Glasgow Sheriff Court. They were asked to make a commitment to “abstain from violence and refrain from carrying a weapon”, following which, they could receive support in accessing services to address any needs that had been identified. These services were provided either through existing statutory services (eg education or housing) or by
third sector (e.g., job readiness support). Compliance with the commitment was monitored via the police and services were temporarily withdrawn if this commitment was breached. In addition, there was an expectation of “collective responsibility”, with breaches by one gang member leading to temporary exclusion of all other members of the same gang from the CIRV programme (Williams, Currie, Lindon, & Donnelly, 2014).

The programme was evaluated through a pragmatic quasi-experimental study, which compared violent offending rates before and after the intervention with a control group from a neighbouring area with a similar socioeconomic profile also experiencing problems with youth gangs. Outcomes data was obtained from police records with offences falling into two broad categories, violent and non-violent offences. The study found there to be a greater reduction in weapons possession in the intervention group (84%) compared to the control group (40%) respectively. However, there was no significant difference with regards to reductions in physical violence. The evaluation only examined police recorded weapon possession rather than other means of determining this information (Williams, Currie, Lindon, & Donnelly, 2014).

Bristol City Council has set up a multi-agency hub to support young people most at risk of becoming involvement with gangs and violence, with support from the voluntary sector including provision of mentors. It reports that demand for the service is great, but it is hoped that with sustained efforts, rates of violent crime will reduce over time. A “deferred prosecution model” is also being piloted for those already involved in the criminal justice system, which will involve intensive social support from community mentors for six to nine months (Local Government Association, 2019).

Wakefield Council’s Liaison and Diversion Service provides 12 weeks of multi-disciplinary support to offenders identified to have vulnerabilities in accessing relevant specialist support. The service worked with 250 young people, with 85% of people engaging for the full twelve weeks duration. Reoffending rates were reported to be 10% lower in this group compared to those that did not receive the intervention (Local Government Association, 2019).

Safer London is a charity that is working with councils across London to support women and girls in escaping gang involvement through a programme called Empower (for 11 to 18 year olds) and London Gang Exit (for 16 to 24 year olds). This programme provides support generally for six months, working closely with councils to identify and support those at risk in accessing health and social support provision, as well as creative activities, for example dance groups. Over 3000 people were supported through Empower over 12 months, with reported improvement in 80% of outcomes, on average, by the end of the intervention (Local Government Association, 2019).

Norfolk County Council launched Operation Gravity in 2016 to address organised crime and drug dealing through data sharing, community working and supporting vulnerable individuals at risk of being victims of gangs. This has reportedly led to multiple raids and arrests. In addition,
the council is looking to implement a multi-agency child exploitation team (MACE) and focus more on early intervention (Local Government Association, 2019).

North East Lincolnshire Council developed a Child Criminal Exploitation (CCE) Partnership Board in 2016 to address county line activity. Subsequently, police, health and social care professionals have been trained in identification of those at risk using a screening tool. Another programme is being developed to support people in exiting gangs (Local Government Association, 2019).

Southend Council have developed a “violence and vulnerability steering group” to tackle county lines. Initial projects have included: See the Signs to raise awareness in parents and carers regarding signs of criminal involvement; training taxi drivers, train staff and security staff in giving advice; and promoting a hotline number. There are also plans to develop a campaign regarding recreational drug use and the exploitation involved in drug production (Local Government Association, 2019).

**Domestic violence approaches**

Youth violence is closely associated with other forms of violence (World Health Organization, 2015). Although the reviews examined did not cover domestic violence in detail, the Crime Reduction Toolkit identified healthcare screening for domestic violence to be most promising. In addition, the National Institute of Health and Care Excellent (NICE) has issued the following evidence-based quality standards with regards to the management of domestic violence and abuse.

- “people presenting to frontline staff with indicators of possible domestic violence or abuse are asked about their experiences in a private discussion.
- people experiencing domestic violence and abuse receive a response from level 1 or 2 trained staff.
- people experiencing domestic violence or abuse are offered referral to specialist support services.
- people who disclose that they are perpetrating domestic violence or abuse are offered referral to specialist services” (NICE, 2016) and (NICE, 2014)

The Identification and Referral to Improve Safety (IRIS) programme is one evidence-based example of the delivery of such recommendations (Barbosa, et al., 2018) and (D’avo, et al.). There is also evidence to suggest that the use of Multi-Agency Risk Assessment Conferences in England and Wales might reduce re-victimisation and improve victim safety. Specialist Domestic Violence Courts have also been reported to improve the victims feeling of safety and aid successful prosecution (Bellis, Hughes, Perkins, & Bennett, 2012).
**Hospital-based programmes**

Hospital-based prevention programmes have been trialled in both the United States and the United Kingdom (NPC Associates, 2017) and (Health Research and Education Trust, 2015). Hospital-community partnerships have also been reported to be associated with positive impact on criminal behaviour in the United States when compared to controls, for example, *SafERteens* and *Caught in the Cross Fire* (David-Ferdon, et al., 2016).

An evaluation of the *Youth Violence Intervention Project* at St Mary’s Hospital, London delivered by *Redthread* showed some early promise. This programme was introduced to support youth involved in violence and presenting to the Emergency Department with a violence-related injury. Participants were assessed by youth workers to determine their wellbeing needs. They were then supported to access existing statutory services that could address the needs identified (eg mental health, housing, or education). The evaluation after the second year followed up those that had engaged with *Redthread* between November 2014 and July 2016. 62 individuals were followed up 6-12 months after the initial intervention. In this group there was a 74% reduction in “total risk score”. 59% had decreased involvement in violence, 37% had decreased involvement in crime, whilst 61% had remained the same. 91% had a “less violent attitude” and 59% saw “a reduction in their risks associated with violence in their neighbourhood, school or college, or home” (NPC Associates, 2017).

Whilst the *Youth Violence Intervention Project* results are encouraging, there is risk of selection bias, only 50% of participants fully engaged with the service and there was no follow up of those that did not engage, nor was there attempt at a comparison with a control group in a population where the service was not available. Of those that did engage, 18% were followed up resulting in additional risk of bias. On overall comparison of rates of hospital readmission due to further assaults, one year readmission rates were lower after introducing the intervention (1/35) than prior to the intervention (1/21), however, no evidence of statistical comparison was included in the report (NPC Associates, 2017). Comparison of trends in a hospital without the intervention would have provided extra confidence that this finding was associated with the intervention itself rather than other external factors. The evaluation alludes to the production of a final evaluation report, which might provide further detail. However, this evaluation was not identified during this review.
Table 18- Summary of review conclusions regarding the evidence base for community-based approaches to lessen harm or prevent future risk in those that have already experienced violence (*Secondary and tertiary prevention have been grouped together given the overlap between these approaches)

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<td>Gang and street violence prevention programmes</td>
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<td>Aggression Replacement Training</td>
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<td>Young offender aftercare</td>
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<td>Hotspots policing (WHO, 2015)</td>
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<td>Healthcare screening for domestic abuse</td>
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<td>Community and problem-oriented policing (Problem-oriented policing in the Crime Reduction Toolkit)</td>
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Key

- WHO Review-most promising
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Diversionary activity for individuals that have already been involved in violence

**MAC-UK** is a charity that has worked with young people involved in gangs in London. Through this engagement they co-developed the **Integrate®** model, which aimed to address health issues and social inequalities with support from psychologists, youth workers and social workers. “Street therapy” was provided in the community and young people were supported to lead musical, sports, theatre and cookery activities, as well as being supported to access education, training and employment. An “ethnographic evaluation” suggested there had been some “positive psychological changes” in this marginalised group (Big Lottery Fund, 2018) and (Bellis, Hughes, Perkins, & Bennett, 2012). Diversionary activities have also been found to be
beneficial in prisons. Whilst, not fully explored in this review, sporting activities are used in multiple prisons across England, for example, to support resettlement and has been reported to be associated with improved engagement, wellbeing, as well as reduced violence and reoffending (Meek, 2018).
Multi-component population level violence prevention models

Although there is evidence for the potential of multiple individual interventions to result in a reduction in violence, understanding the population level impact of these interventions at scale and in combination with other interventions is less well understood. There are a variety of population level violence prevention models that are frequently mentioned and that involve multiple components. These include: the *Cure Violence* model; the *Cardiff Violence Prevention Programme*; the *Scottish Violence Reduction Unit* and the North West England *Trauma and Injury Intelligence Group*.

Cure Violence

The *Cure Violence* approach is based on the theory that violence can be contagious and that spread can be limited through targeted measures. The model was initially developed in Chicago to address gun-related violence where it was named Ceasefire-Chicago. An evaluation of this model included seven different sites and suggested that some of these areas had experienced significant reductions in shootings compared to controls and also reductions in density of shootings. However, other intervention areas had not (Skogan, Hartnett, Bump, & Dubois, 2008). Key components of the model included:

- focus on high-risk individuals to “interrupt the cycle of violence and to change norms about behavio(u)r”
- support from culturally appropriate violence interrupters to support mediation of immediate conflict
- support from culturally appropriate outreach workers to support individuals in pursuing alternative paths
- reinforcing the message that violence is not acceptable through community group rallies (Skogan, 2008)

The model has since been replicated in other cities across the United States, including Baltimore, New York, Phoenix and Pittsburgh. Results in these cities have been similarly mixed, with some areas showing an increase in shootings and violence with the intervention. In at least one case, deviation from the original model was felt to be a potential contributor to this inverse finding (Butts, Roman, Bostwick, & Porter, 2015).

Injury surveillance data sharing models

Data sharing to inform multi-agency approaches to violence prevention is the core principle of multiple population-level violence prevention approaches. The *Cardiff Violence Prevention Programme* started development in 1997 through multi-agency partnership initially between city government, police, city licensing regulators, an Emergency Medicine Consultant and a Professor of Oral and Maxillofacial Surgery.
Membership of the multi-agency group expanded over time and included ambulance services, transport, education, and local licensees. Enhanced and systematic data was collected from hospitals regarding: the location; timing; and nature of the violent incident. This data was anonymised and then combined with police data. The partnership would then meet regularly to consider targeted approaches to preventing violence in the area. These included, for example: adjustments to police patrol routes; mobilising police resources to the city centre during weekends; focused work at licensed premises of concern; adjustment of use of closed circuit television; changes to public transport and traffic flow; use of plastic glassware; and increased pedestrianisation. These initiatives started to be implemented from between 1999 and 2002. During this period, there were no other major changes to either emergency services or law enforcement (Florence, Shepherd, Brennan, & Simon, 2011).

The Cardiff Model was evaluated through a comparative time series analysis, comparing rates of violence in Cardiff between 2000 and 2007 with rates in 14 other cities across the United Kingdom with similar sociodemographic and geographical features: Birmingham, Bristol, Coventry, Derby, Leeds, Leicester, Lincoln, Newcastle upon Tyne, Northampton, Plymouth, Preston, Reading, Sheffield, and Stoke on Trent. Comparisons further controlled for strength of police force, extent of unemployment, and national changes to recording of crime. The implementation date was considered to be January 2003, with rates in the preceding 36 months compared to rates in the 36 months after implementation. After controlling for confounding factors, a 21% reduction in total assault rates was seen, along with a 32% reduction in wounding assault rate and there was a significant divergence from the comparison cities with regards to both of these outcomes (Figure 4). In Cardiff, violence-related hospital admission rates reduced for 7/100,000 per month pre-intervention to 5/100,000 a month post-implementation, whilst rates of admissions in comparison cities increased from 5/100,000 to 8/100,000 (Florence, Shepherd, Brennan, & Simon, 2011).

The Cardiff model has been replicated in Cambridge since 2007, with reductions in the number of assault patients requiring care in the emergency department, and in reports of violent crimes.
with injury to the police, but no decrease in admissions due to assault or violence. However, the evaluation reviewed regarding this model did not include comparison with a non-intervention area. Again, ensuring high quality representative data was a core component of this intervention (Boyle, Snelling, White, Ariel, & Ashelford, 2013).

The North West of England also has a well-developed injury surveillance system in the form of the Trauma and Injury Intelligence Group, which produces regular reports for local stakeholders to inform local strategic planning around violence and alcohol. In addition, the group responds to ad-hoc requests for further intelligence. An example of initial activity that had been informed by surveillance data included: targeted enforcement at drinking establishments associated with high rates of assaults resulting in emergency department care; police and licensing officer visits to check for legal compliance; and provision of support in preventing violence and alcohol-related harm in and near venues. In 2007/2008, data on glass-related injury attendances stimulated licensed premises to use plastic glassware during periods of likely peak rates of violence (Quigg, Hughes, & Bellis, 2011).

Examination of six years of data covering the Wirral local authority area (one of the first areas to join the surveillance system that had consistently provided data from 2003/4) has suggested that nearly half of intentional injuries have been associated with alcohol consumption. Over the six years reviewed, a significant reduction in both intentional injuries (35.6%; p<0.001) and unintentional injuries (11.5%; p<0.001) was seen. The greatest reductions in intentional injuries were seen in those aged 5 to 17 year olds (49.1%) and those aged 65 years or older (43.5%). Assaults accounted for 70% of injury attendances. The system also identified that in the Wirral, the police were not aware of 25% of assault incidents that attended the Emergency Department. No comparison with control populations were included within the study reviewed (Quigg, Hughes, & Bellis, 2011).

Scottish Violence Reduction Unit (VRU)

The Scottish VRU is addressing violence through an approach that includes the following key areas:

- primary prevention
- secondary prevention
- tertiary prevention
- enforcement and criminal justice
- attitudinal change (Scottish Violence Reduction Unit)

The Scottish VRU was established in 2005 and developments so far have been summarised below (Table 19). One evaluation of the impact of this model predominantly focussed on impact on “assault-related sharp force” injuries admitted to hospital. The analysis suggested that between 2001 and 2013 there had been a significant reduction in injuries (RR 0.57, 95%CI 0.57–0.68). The analysis controlled for changes in sociodemographic and location changes. Most dramatic reductions were seen after 2008/9 in those aged 15-19 years and those aged
20-24 years. Greater reductions were also seen in the West of Scotland where the authors had noted that there had been particular focus on addressing violence, particularly in the early years of the VRU (Goodall, MacFie, Conway, & McMahon, 2018). There was, however, no comparison with other populations in the United Kingdom that had not been exposed to any components of the violence prevention model. The study also examined trends in police weapons offences from 2005-2014 in relation to introduction of violence prevention interventions (Figure 5). However, only data from West Scotland were included and there was therefore no attempt at comparative analysis or to control for potential independent impacts of changes in population demographics over time (Goodall, MacFie, Conway, & McMahon, 2018). Nevertheless, from 2007/8-2016/17, the number of homicides in Scotland has been reported to have fallen by 47%. Furthermore, in 2016/2017, only five homicide victims were under 21 years of age (Ford & Grimshaw, 2018).

Table 19-Scottish VRU developments 2005-2015 (Scottish Violence Reduction Unit)

<table>
<thead>
<tr>
<th>Year</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>DNA testing and finger printing of all knife carriers</td>
</tr>
<tr>
<td>2006</td>
<td>Safer Scotland campaign with a focus on knife crime Change in remand guidelines and sentencing for carrying knives</td>
</tr>
<tr>
<td>2007</td>
<td>Hosted World Health Organization global conference “Violence is declared a public health issue” Injury surveillance implemented in Lanarkshire</td>
</tr>
<tr>
<td>2008</td>
<td>Brief motivational interviewing trials commenced for alcohol and violence Community Initiative to Reduce Violence (CIRV) commenced in Glasgow Medics Against Violence charity launched</td>
</tr>
<tr>
<td>2009</td>
<td>“Ask, validate, document, refer” intervention rolled out to dentists to support in identifying and managing domestic violence Parentline service commenced to support parents with children involved in gangs</td>
</tr>
<tr>
<td>2010</td>
<td>“alcohol monitoring bracelets” Injury surveillance in Fife</td>
</tr>
<tr>
<td>2011</td>
<td>Mentors in Violence Prevention programme piloted in Edinburgh Community assets approach in Kilmarnock commences Partnership with the Royal Edinburgh Military Tattoo in provision of employment to younger men with convictions</td>
</tr>
<tr>
<td>2012</td>
<td>Remote alcohol monitoring trial begins with students</td>
</tr>
<tr>
<td>2013</td>
<td>Domestic violence training extended to vets</td>
</tr>
<tr>
<td>2014</td>
<td>“Building Safer Communities” approach Brief violence intervention trialled in a “medical environment” Recruitment of people with convictions to support the Commonwealth Games. “Community in Motion” project in Glasgow</td>
</tr>
<tr>
<td>2015</td>
<td>MVP extended across Scotland Scottish Government agreed funding for a “food truck social enterprise” to provide more employment opportunities for those with convictions. Domestic violence training extended to Fire and Rescue Service and beauty industry</td>
</tr>
</tbody>
</table>
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

Figure 5- Timeline of violence reduction measures implemented in the Strathclyde Police Force area from 2002 to 2014/15 plotted alongside number of weapons and knife related offences 2005/6 to 2013/14. (Goodall, MacFie, Conway, & McMahon, 2018)
Limitations

This review aimed to assimilate current evidence regarding the effectiveness of violence prevention interventions to reduce knife crime, youth violence or gang-related violence in the United Kingdom. It is, however, important to be aware of its limitations. Firstly, time and capacity limitations restricted the ability to extensively and systematically search for literature. Although searches using databases were undertaken to identify literature relating to knife crimes, much of the literature on violence prevention in general was obtained through violence prevention networks and often following recent publication, rather than through multiple systematic searches using a much broader range of search terms regarding violence and risk factors for violence. Furthermore, no structured searches were undertaken with regards to youth violence prevention or gang-related violence in general, rather than specifically knife crimes. Also, the review does not cover specific forms of violence, such as violence against women, intimate partner violence, or elder abuse.

In addition, some of the key reviews included did not specify a search methodology within their reporting and one review did not include a quality appraisal methodology. This observation was also made in a recent systematic review by Farrington et al. (Farrington, Gaffney, Losel, & Ttofi, 2017). As such, key literature may have been missed. This may result in a lack of awareness regarding additional interventions that might also support violence reduction and in addition, incomplete appraisal of interventions that have been included within the review. There is also potential for publication bias, with studies where interventions have been found to have a positive impact being more likely to be published than studies where the interventions suggested no impact. Furthermore, time restrictions resulted in the Crime Reduction Toolkit only being reviewed with regards to overall conclusions. Further detail is included within the toolkit as to the populations that the evidence was based on and further review of this information may have aided improved understanding of the United Kingdom evidence base.

The Crime Reduction Toolkit could also be further examined to consider the effectiveness of interventions to impact on crimes, other than violent crimes, that are potential risk factors for future violence. Again, this was outside the capacity of this present review, which necessitated a more focussed examination of this resource, looking only at violent crimes as an outcome. In the same way, the EIF Guidebook could be further examined to consider outcomes relating to wider risk factors for violence other than crime and antisocial behaviour. However, it is hoped that the most relevant interventions have been identified as part of this review, through the triangulation of initial findings from these resources with those in the other youth violence prevention reviews included. In addition to further examination of these resources, there would be benefit in identifying more recently published resources through a comprehensive search strategy. It is therefore important that further focussed and detailed literature reviews regarding any specific interventions of interest, where the evidence of effectiveness in the United Kingdom population is not clear, are undertaken to ensure the breadth of evidence is understood prior to decision-making with respect to implementation. This
might include more in-depth review of evidence within the Crime Reduction Toolkit or the EIF Guidebook.

Although the review focuses on interventions trialled in the United Kingdom where possible, there is also reference to international evidence. Indeed, no multi-sector synopsis of United Kingdom-based evidence involving a transparent methodology was identified by this review process. Even though in many cases, the evidence presented is of good quality, it is important to recognise that it may not be applicable to the United Kingdom due to differences in “usual care” between countries. An example of this is the *Family Nurse Partnership*, where long term effectiveness has been demonstrated in the United States across a wide variety of outcomes, whilst the initial evaluation of United Kingdom implementation did not show significant benefit compared to usual care during the first two years of the infant’s life. It is therefore **important to understand the “usual care” of any international study population prior to attempting to apply findings to the United Kingdom population.** Piloting international evidence-based interventions and ensuring rigorous evaluation of such pilots prior to further roll out is also particularly important.

Finally, due to the increase in rates of serious violence seen across the country, violence prevention is a high priority both locally and nationally. Evidence and reviews of evidence continue to evolve rapidly. Therefore, continued horizon scanning is vital to ensure that new evidence is promptly identified, robustly appraised and incorporated into the existing evidence-base. **Coordination of violence prevention evidence horizon scanning involving both databases of formal published research and grey literature across multiple sectors could be beneficial both in terms avoiding duplication of efforts, and in ensuring a rigorous approach to quality appraisal as evidence continues to emerge.**
Discussion and conclusions

A wide variety of violence prevention interventions have been trialled. Although a substantial portion of evidence has emerged internationally, and particularly from the United States, evidence also continues to emerge from the United Kingdom.

Common to all major reviews examined was the need for a comprehensive approach to violence that encompasses primary, secondary and tertiary prevention. With regards to primary prevention, some interventions focused on communities thought to be at higher risk, for example, deprived populations, whilst others are measures that can be applied universally, reaching those at lower and higher risk of exposure to violence, as well as those with actual exposure to violence. The Serious Violence Strategy referred to a systematic review that suggests targeted programmes might be more effective than universal programmes (Home Office, 2018). Although there is a need to target those at highest risk of perpetrating violence, it is important to consider the “Prevention Paradox”, and that by focussing on this group, the opportunity to prevent more violence across a much larger population could be missed (Rose, 1985). Furthermore, it has been highlighted that the potential for programmes to promote positive impacts in people’s lives rather than merely prevent negative impacts should also be considered by policy makers (O’Connor & Waddell, 2015). This was also acknowledged in the Faculty of Public Health position statement regarding the role of public health in violence prevention (Faculty of Public Health, 2016). The time lag between intervention and positive impact has also been noted, which, particularly with regards to early intervention, can be many years (Home Office, 2018).

In developing local strategy to address the increased rates of knife crimes, as well as increases in youth violence more generally, there are signs of benefit in multicomponent approaches that incorporate evidence-based primary, secondary and tertiary preventative interventions, particularly over childhood and in families, that are relevant to specific local need. Common features of the multi-component approaches include strong multi-agency partnership, a long-term commitment to reducing rates of violence over years rather than months, and careful monitoring of impact through good quality surveillance data and rigorous evaluation processes. These features should be incorporated into the local approach to addressing this highly challenging and important public health issue.
Recommendations

This review has led to the following recommendations:

1. Establish the extent to which parenting programmes, good quality early years education, life and emotional skills training, bullying prevention programmes, and therapeutic approaches for young people at greatest risk of becoming involved in or already involved in violence:
   a. Are currently being provided across the WMVPA footprint.
   b. Have been evaluated and what the results of these evaluations suggest.
   c. May need to be implemented

2. Promote shared understanding regarding current local approaches to hotspot policing, community or problem-oriented policing, and restorative justice approaches, and establish their effectiveness and ways in which these might be further developed.

3. Establish the root causes of local patterns of violence and select approaches that would address these causes. If these approaches have been identified by this review to have a limited evidence base, it will be important to:
   a. Undertake more systematic searching and reviewing of both formally published and grey literature and existing resources such as the Crime Reduction Toolkit and EIF Guidebook to establish the breadth of evidence regarding the effectiveness of these approaches (including consideration of interventions to address crimes other than violence, that are risk factors for violence and that are presented within the Crime Reduction Toolkit).
   b. Pilot these approaches and ensure rigorous evaluation of such pilots prior to further roll out, which is even more important in this circumstance.

4. Continue horizon scanning for both formally published research and grey literature to identify newly emerging evidence. Coordination of these processes across multiple sectors and at local and national levels could be beneficial, both in terms avoiding duplication of efforts and in ensuring a rigorous approach to quality appraisal.

5. Develop a dedicated resource as part of an evolving Violence Reduction Unit that could expedite the delivery of many of these recommendations and in addition, could have a vital role in providing ongoing continuity of shared understanding regarding the evolving evidence base both nationally and locally. This function would require sustained application of specialist public health skills.

Ultimately, this should lead to improved understanding regarding what are likely to be the most effective approaches to addressing this significant and challenging public health issue across the West Midlands metropolitan area.


Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence


Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence


Appendix A

Literature Search Methodology

Search 1 - Undertaken by the Public Health England Knowledge & Library Services team

his is Secondary Heading One

Search 1 - Undertaken by the Public Health England Knowledge & Library Services team

Scopus

TITLE-ABS-KEY ( ( stab OR knife ) W/2 ( crim* OR violen* OR attack OR stab* ) ) AND ( LIMIT-TO ( PUBYEAR , 2019 ) OR LIMIT-TO ( PUBYEAR , 2018 ) OR LIMIT-TO ( PUBYEAR , 2017 ) OR LIMIT-TO ( PUBYEAR , 2016 ) OR LIMIT-TO ( PUBYEAR , 2015 ) OR LIMIT-TO ( PUBYEAR , 2014 ) OR LIMIT-TO ( PUBYEAR , 2013 ) ) AND ( LIMIT-TO ( AFFILCOUNTRY , "United Kingdom" ) )

Database: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) <1946 to September 20, 2018>

Search Strategy:
--------------------------------------------------------------------------------
1 United Kingdom/ (217187)
2 (national health service* or nhs*).ti,ab.in. (159183)
3 (english not (published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english).ti,ab. (89699)
4 (gb or "g.b." or britain* or (british* not "british columbia") or United Kingdom or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or (wales or "south wales") not "new south wales") or welsh*).ti,ab,jw,in. (1851865)
5 (bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambridge not (massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealands*) or ("canterbury's" not zealands*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or ely or "ely's" or exeter or "exeter's" or gloucester or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or leeds* or leicester or "leicester's" or (lincoln not nebraska*) or ("lincoln's" not nebraska*) or (liverpool not (new south wales* or nsw)) or (london not (ontario* or ont or toronto*)) or ("london's" not (ontario* or ont or toronto*)) or manchester or "manchester's" or (newcastle not (new south wales* or nsw)) or (newcastle's not (new south wales* or nsw)) or ("newcastle's" not (new south wales* or nsw)) or norwich* or "norwich's" or nottingham* or nottingham's or norwich* or oxford* or "oxford's" or peterborough* or ("peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston* or "preston's" or preston* or "preston's" or (liverpool not (new south wales* or nsw)) or (london not (ontario* or ont or toronto*)) or ("london's" not (ontario* or ont or toronto*)) or ("manchester's" or (newcastle not (new south wales* or nsw))) or (newcastle's not (new south wales* or nsw)) or norwich* or "norwich's" or nottingham* or nottingham's or oxford* or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston* or "preston's" or "preston's" or ripon* or ("ripton's" or safford* or "safford's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton* or "southampton's" or st albans or stoke* or "stoke's" or sunderland or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or wells or westminster or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts* or boston* or harvard*)) or ("worcester's" not (massachusetts* or boston* or harvard*)) or (york not ("new york" or ny or ontario* or nt or toronto*)) or ("york's" not ("new york" or ny or ontario* or nt or toronto*)) or ("york's" not ("new york" or ny or ontario* or nt or toronto*)))}.ti,ab.in. (1221036)
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

6 (bangor or "bangor's" or cardiff or "cardiff's" or newport or "newport's" or st asaph or "st asaph's" or st davids or swansea or "swansea's").ti,ab,in. (47198)
7 (aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or (perth not australia*) or stirling or "stirling's").ti,ab,in. (178585)
8 (armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or newry or "newry's").ti,ab,in. (22135)
9 or/1-8 (2346713)
10 (exp africa/ or exp americas/ or exp antarctic regions/ or exp arctic regions/ or exp asia/ or exp australia/ or exp oceania/) not (exp great britain/ or europe/) (2617044)
11 9 not 10 (2219088)
12 Weapons/ (816)
13 crime/ or exp violence/ (99060)
14 12 and 13 (147)
15 exp Wounds, Stab/ (7654)
16 (Knife adj2 (crim* or stab or violen* or injur*)).ti,ab,kw. (213)
17 14 or 15 or 16 (7901)
18 11 and 17 (798)
19 limit 18 to (english language and yr="2013 -Current") (123)

Database: Embase <1996 to 2018 Week 38>
Search Strategy:

1 Weapons/ (2851)
2 crime/ or exp violence/ (114506)
3 1 and 2 (777)
4 exp stab wound/ (3274)
5 ((Knife or Stab) adj2 (crim* or stab or violen* or injur*)).ti,ab,kw. (3600)
6 3 or 4 or 5 (5731)
7 United Kingdom/ (285582)
8 (national health service* or nhs*).ti,ab,in,ad. (282259)
9 (english not ((published or publication* or translit* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab. (32159)
10 (gb or "g.b." or britain* or (british* not "british columbia") or United Kingdom or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or ((wales or "south wales") not "new south wales") or welsh*).ti,ab,jw,in,ad. (2165894)
11 (bath or "bath's" or ((birmingham not alabama*) or ("birmingham's" not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambria not massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or chelmsford or "chelmsford's" or chester or "chester's" or chichester or "chichester's" or coventry or "coventry's" or derby or "derby's" or (durham not carolina* or prince edward island* or "durham's" not carolina* or prince edward island*) or ("durham's" not (carolina* or prince edward island*)) or ely or "ely's" or exeter or "exeter's" or glasgow or "glasgow's" or hereford or "hereford's" or hull or "hull's" or lancaster or "lancaster's" or leeds* or leicester or "leicester's" or lincoln or "lincoln's" or liverpool or "liverpool's" or liverpool* or newcastle or "newcastle's" or newcastle* or norwich or "norwich's" or norwich or "norwich's" or nottingham* or nottingham* or oxford* or "oxford's" or peterborough or "peterborough's" or plymouth or "plymouth's" or portsmouth or "portsmouth's" or preston or "preston's" or ripon or "ripon's" or salisbury or "salisbury's" or sheffield or "sheffield's" or southampton or "southampton's" or st albans or stoke or "stoke's" or Sunder and or "sunderland's" or truro or "truro's" or wakefield or "wakefield's" or well or westminister or "westminster's" or winchester or "winchester's" or wolverhampton or "wolverhampton's" or (worcester not (massachusetts* or boston* or harvard*)) or ("worcester's" not (massachusetts* or boston* or harvard*)) or (york not ("new york"* or ny or ontario* or ont or toronto*)) or ("york's" not ("new york"* or ny or ontario* or ont or toronto*)) or (york not ("new york"* or ny or ontario* or ont or toronto*)) (1719151)
12 (bangor or "bangor's" or cardiff or "cardiff's" or newport or "newport's" or st asaph or "st asaph's" or st davids or swansea or "swansea's").ti,ab,ad. (71411)
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

13 (aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or (perth not australia*) or ("perth's" not australia*) or stirling or "stirling's").ti,ab,in,ad. (239324)
14 (armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or derry or "derry's" or newry or "newry's").ti,ab,in,ad. (31326)
15 or/7-14 (2658403)
16 (exp "arctic and antarctic"/ or exp oceanic regions/ or exp western hemisphere/ or exp africa/ or exp asia/ or exp "australia and new zealand") not (united kingdom/ or europe/) (2192692)
17 15 not 16 (2489015)
18 6 and 17 (653)
19 limit 18 to (english language and yr="2013 -Current") (204)

Database: Ovid Emcare <1995 to 2018 week 37>
Search Strategy:

1 Weapons/ (2716)
2 crime/ or exp violence/ (74557)
3 1 and 2 (926)
4 exp stab wound/ (1110)
5 ((Knife or Stab) adj2 (crim* or stab or violen* or injur*)).ti,ab,kw. (1110)
6 3 or 4 or 5 (2603)
7 United Kingdom/ (116486)
8 (national health service* or nhs*).ti,ab,in,ad. (113419)
9 (english not ((published or publication* or translat* or written or language* or speak* or literature or citation*) adj5 english)).ti,ab. (16046)
10 (gb or "g.b." or britain* or (british* not "british columbia") or United Kingdom or "u.k." or united kingdom* or (england* not "new england") or northern ireland* or northern irish* or scotland* or scottish* or (wales or "south wales") not "south wales") or welsh*).ti,ab,jw,in,ad. (700700)
11 (bath or "bath's" or ((birmingham not alabama*) or (birmingham's not alabama*) or bradford or "bradford's" or brighton or "brighton's" or bristol or "bristol's" or carlisle* or "carlisle's" or (cambridge not (massachusetts* or boston* or harvard*)) or ("cambridge's" not (massachusetts* or boston* or harvard*)) or (canterbury not zealand*) or ("canterbury's" not zealand*) or chelmsford or "chelmsford's" or chester* or chester's* or chichester or "chichester's" or coventry or "coventry's" or derby* or derby's or (durham not (carolina* or nc)) or ("durham's" not (carolina* or nc)) or eley or "eley's" or exeter* or (exeter's* or gloucester* or "gloucester's" or hereford or "hereford's" or hull or "hull's" or lancaster* or (lancaster's* or leads* or leicester or "leicester's" or (lincoln not nebraska*) or (lincoln's not nebraska*) or (liverpool not (new south wales* or nsw)) or ("liverpool's" not (new south wales* or nsw)) or ((london not (ontario* or ont or toronto*)) or (london's not (ontario* or ont or toronto*)) or manchester* or "manchester's" or (newcastle not (new south wales* or nsw)) or ("newcastle's" not (new south wales* or nsw)) or norwich or (norwich* or (nottingham's or nottingham* or oxford or "oxford's" or preston* or preston's or ripon* or (ripon's* or salford* or salisbury* or ("salisbury's" or sheffield* or "sheffield's" or sheffield's or southampton* or "southampton's" or st albans or stoke or "stoke's" or "stoke's" or (sunderland or "sunderland's" or "sunderland's" or truro or "truro's" or wakefield* or wells or westminster or (westminster's or winchester or "winchester's" or (wolverhampton or wolverhampton's or (worcester not (massachusetts* or boston* or harvard*)) or ("worcester's" not (massachusetts* or boston* or harvard*)) or ("york's" not ("new york" or ny or ontario* or ont or toronto*)) or ("york's" not ("new york" or ny or ontario* or ont or toronto*)))))).ti,ab,ia.in,ad. (546647)
12 (bangor or "bangor's" or cardiff* or (cardiff* or newport or "newport's" or st asaph or (st asaph* or (st davids or swansea* or "swansea's") or (swansea's*) or (swansea's inverness or (perth not australia*) or ("perth's" not australia*) or stirling or "stirling's").ti,ab,ia.in,ad. (71902)
13 aberdeen or "aberdeen's" or dundee or "dundee's" or edinburgh or "edinburgh's" or glasgow or "glasgow's" or inverness or (perth not australia*) or ("perth's" not australia*) or stirling or "stirling's").ti,ab,ia.in,ad. (71902)
14 (armagh or "armagh's" or belfast or "belfast's" or lisburn or "lisburn's" or londonderry or "londonderry's" or derry or "derry's" or newry or "newry's").ti,ab,ia.in,ad. (10161)
15 or/7-14 (850024)
16 (exp "arctic and antarctic"/ or exp oceanic regions/ or exp western hemisphere/ or exp africa/ or exp asia/ or exp "australia and new zealand") not (united kingdom/ or europe/) (694623)
17 15 not 16 (786067)
18 6 and 17 (314)
Search 2 - Undertaken by the Public Health England Knowledge & Library Services team

“This search builds on the previous search “What is the descriptive epidemiology of Knife Crime in the UNITED KINGDOM and what works in reducing Knife Crime?” conducted in September 2018 and covering 2013-2018. The same broad search terms again, this time with a specific focus on young people and no restriction to the UNITED KINGDOM. Any 2018 results duplicated in that previous search have been removed here.

There were no results for the named author Professor M Bellis, however his work was included in the results before the 2018 – 2019 date restriction was added.

Scopus
Social Policy and Practice"
Appendix B

Early Intervention Foundation Guidebook

Evidence standard framework and Cost rating framework

Evidence Standards

“We arrive at our strength of evidence ratings, measured against our evidence standards, through a detailed consideration of all significant evidence against 33 criteria, covering design, sample, measurement, analysis and impact. These evidence assessment criteria are intended to be applied by individuals who have been extensively trained in EIF programme assessment procedures. This process and our ratings are then subjected to rigorous quality assurance with independent experts. In our view, it is not possible to replicate this process externally.” (Early Intervention Foundation, 2018)

“Level 4: Effectiveness

The programme has evidence from at least two rigorously conducted evaluations (RCT/QED) demonstrating positive impacts across populations and environments lasting a year or longer. The evidence may include significant adaptations to meet the needs of different target populations.

The evidence must meet the following requirements:

- The intervention has demonstrated consistent significant positive child outcomes in two rigorous evaluations (RCT/QED) meeting all criteria required for level 3.
- At least one evaluation uses a form of measurement that is independent of the study participants (and also independent of those who deliver the programme). In other words, self-reports (through the use of validated instruments) might be used, but there is also assessment information independent of the study participants (e.g., an independent observer, administrative data, etc).
- There is evidence of a long-term outcome of 12 months or more from at least one of these studies.

To achieve a 4+ rating:

All of the criteria for level 4 must be met.

At least one of the effectiveness evaluations will have been conducted independently of the programme developer. The intervention must have evidence of improving EIF child outcomes from three or more rigorously conducted evaluations (RCT/QED) conducted within real world settings.

Level 3: Efficacy

The programme has evidence from at least one rigorously conducted RCT/QED demonstrating a statistically significant positive impact on at least one child outcome.

The evidence must meet the following requirements:

- The evaluation must meet the requirements for a Level 2.
- Participants are randomly assigned to the treatment and control groups through the use of methods appropriate for the circumstances and target population, OR sufficiently rigorous quasi-experimental
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

methods (eg regression discontinuity, propensity score matching) are used to generate an appropriately comparable sample through non-random methods.

- Assignment to the treatment and comparison group is at the appropriate level (eg individual, family, school, community).
- An ‘intent-to-treat’ design is used, meaning that all participants recruited to the intervention participate in the pre/post measurement, regardless of whether or how much of the intervention they receive, even if they drop out of the intervention (this does not include dropping out of the study – which is then regarded as missing data).
- The treatment and comparison conditions are thoroughly described.
- The intervention is delivered with acceptable levels of fidelity in the evaluation study.
- The comparison condition provides an appropriate counterfactual to the treatment group.
- There is baseline equivalence between the treatment and comparison-group participants on key demographic variables of interest to the study and baseline measures of outcomes (when feasible).
- Risks for contamination of the comparison group and other confounding factors are taken into account and controlled for in the analysis if possible.
- Participants are blind to their assignment to the treatment or comparison group. (Only a binding criteria if feasible.)
- The study should report on overall and differential attrition (or clearly present sample size information such that this can be readily calculated).
- If overall study attrition is greater than 10%, then study authors must report differences between the study drop-outs and completers, as well as perform analyses demonstrating that study attrition did not undermine the equivalence of the study groups (and adjusting for this if differences are identified).
- Measurement is blind to group assignment.
- There is consistent and equivalent measurement of the treatment and control groups at all points when measurement takes place.
- Statistical models control for baseline differences between the treatment and comparison groups in outcome measures and demographic characteristics that might be apparent after recruitment.
- The treatment condition is modelled at the level of assignment (or deviations from that strategy are justified statistically).
- Any methods are used and reported for the treatment of missing data.
- The findings are of sufficient magnitude to justify further analysis. (Not yet assessed in pure cost-effectiveness terms.)

To achieve a 3+ rating:
The programme will have obtained evidence of a significant positive child outcome through an efficacy study, but may also have additional consistent positive evidence from other evaluations (occurring under ideal circumstances or real world settings) that do not meet this criteria, thus keeping it from receiving an assessment of 4 or higher.

Level 2: Preliminary evidence

The programme has evidence of improving a child outcome from a study involving at least 20 participants, representing 60% of the sample, using validated instruments.

The evidence must meet the following requirements:
- Participants complete the same set of measures once shortly before participating in the programme and once again immediately afterwards.
- The sample is representative of the intervention’s target population in terms of age, demographics and level of need. The sample characteristics are clearly stated.
- The sample is sufficiently large to test for the desired impact. A minimum of 20 participants complete the measures at both time points within each study group (eg a minimum of 20 participants in pre/post study
Approaches to prevent or reduce violence with a focus on youth, knife and gang-related violence

not involving a comparison group or a minimum of 20 participants in the treatment group AND comparison group).

- The study has clear processes for determining and reporting drop-out and dose.
- For pre/post studies, overall study attrition is not higher than 40% (with at least 60% of the sample retained). For comparison group studies, overall study attrition is not higher than 65% (with at least 35% of the sample retained).
- The measures are appropriate for the intervention’s anticipated outcomes and population.
- The measures are valid and reliable. This means that the measures are standardised and validated independently of the study and the methods for standardisation are published. Administrative data and observational measures might also be used to measure programme impact, but there is sufficient information to determine their validity for doing this.
- Measurement is independent of any measures used as part of the treatment. The methods used to analyse results are appropriate given the data being analysed (categorical, ordinal, ratio/parametric or non-parametric, etc) and the purpose of the analysis.
- There are no harmful effects.
- There is evidence of a statistically significant positive impact (p < .05) on at least one EIF outcome.
- The intervention’s model clearly identifies and justifies its primary and secondary outcomes and there is a statistically significant main effect of improving at least one or more of these outcomes, depending on the number of outcomes measured.
- There is consistency amongst the findings, resulting in few mixed results within the study.
- Subgroup analysis is used to verify for whom the intervention is effective and the conditions under which the effectiveness is found. (Statistically significant findings within subgroups are not treated as a replacement for a main effect.)

To achieve a 2+ rating:
The programme will have observed a significant positive child outcome in an evaluation meeting all of the criteria for a level 2 evaluation, but also involving a treatment and comparison group. There is baseline equivalence between the treatment and comparison-group participants on key demographic variables of interest to the study and baseline measures of outcomes (when feasible).” (Early Intervention Foundation, 2018)

“What is the cost rating?
The second rating we provide is an estimation an intervention’s relative costs, based on the inputs required to deliver it. These inputs include the amount of time required to deliver the intervention, the number of families it attempts to reach, practitioner qualifications and training fees.

This rating is based on information that programme providers have supplied about the components and requirements of their programme. Based on this information, EIF rates programmes on a scale from 1 to 5, where 1 indicates the least resource-intensive programmes and 5 the most resource-intensive. When consistently applied, this scale allows for comparison between programmes in terms of the resources required for delivery.

The cost rating is not the same as the market price of an intervention, which will be negotiated and agreed commercially between providers and commissioners.

Each cost rating is associated with an indicative range of unit costs, on a per-recipient basis. These are not actual unit costs for any individual programme or delivery in any particular place.

What do the cost ratings mean?
- A rating of 1 indicates that a programmes has a low cost to set up and deliver, compared with other interventions reviewed by EIF. This is equivalent to an estimated unit cost of less than £100.
• A rating of 2 indicates that a programme has a medium-low cost to set up and deliver, compared with other interventions reviewed by EIF. This is equivalent to an estimated unit cost of £100–£499.
• A rating of 3 indicates that a programme has a medium cost to set up and deliver, compared with other interventions reviewed by EIF. This is equivalent to an estimated unit cost of £500–£999.
• A rating of 4 indicates that a programme has a medium-high cost to set up and deliver, compared with other interventions reviewed by EIF. This is equivalent to an estimated unit cost of £1,000–£2,000.
• A rating of 5 indicates that a programme has a high cost to set up and deliver, compared with other interventions reviewed by EIF. This is equivalent to an estimated unit cost of more than £2,000.
• A rating of NA indicates that the information required to generate a cost rating is not available at this time.”

(Early Intervention Foundation, 2019b)
Appendix C

Methodology for determining relevant and rigorous UK-based evidence from the Early Intervention Foundation guidebook

1. Go to website: https://guidebook.eif.org.uk/

2. Programmes filtered on:
   a. evidence rating 3 and 4
   b. child outcomes: preventing violence, crime and antisocial behaviour
   35 programmes identified

3. PDF summaries or website entries were reviewed, specifically:
   a. “child outcomes” to determine which studies relate to preventing crime, violence and antisocial behaviour
   b. “study” section reviewed to determine whether the study population was based in the United Kingdom