

Factors associated with serious or persistent violent offending: Findings from a rapid evidence assessment

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Factors associated with serious or persistent violent offending: Findings from a rapid evidence assessment

Executive Summary

Identification of serially violent individuals by the police could allow forces to be aware of and, where possible develop strategies to manage the risk to the public. This paper presents findings from a Rapid Evidence Assessment (REA) designed to explore the evidence base on factors associated with, or predictive of, known serious or persistent violent offending excluding domestic or sexual violence.

The REA is based on 53 studies from a systematic search of 7 databases using a strictly applied set of search and assessment criteria and recommended sources by academic experts. The factors identified and discussed in this report have been found by some research studies to be predictive of repeat violent behaviour. The characteristics identified are associated with an **increased relative risk** of repeat violent offending - that is that offenders with these characteristics are more **likely** to commit a further offence compared with other offenders. An increased relative risk does not mean that all offenders with that characteristic will go on to commit further offences.

Key findings from the REA

The range of factors identified by the evidence reviewed as being associated with persistent violent offending is presented in the full report. Those factors identified through studies graded with the highest quality¹ and most likely to be of use to police analysts are listed below. The evidence on factors associated with serial violent offending in women is limited; therefore the factors primarily apply to male offenders:

- An offending career that begins before the age of 14 is highly predictive of later violent offending and a longer criminal career (reported in 9 studies of which 4 were graded 1).
- Individuals with a long criminal career are more likely to commit violent crimes (reported in 7 studies of which 5 were graded 1).
- Individuals with a history of violence are more likely to commit further violent crimes (reported in 10 studies of which 5 were graded 1).

There were also several other factors where there is some evidence that suggests it may be associated with violent reoffending but that evidence is not as strong. These may be worth considering when refining the prioritisation of those identified as high risk. These factors include drug use in adolescence (4 studies), gang membership (5 studies) and antisocial behaviour at a young age or anti-social personality traits in adults (4 studies). In addition, there is some limited evidence that previous convictions for certain specific offences such as kidnapping and blackmail are associated with an increased relative risk of committing further serious offences such as homicide and rape (3 studies).

¹ A study graded 1 is of the highest quality- as identified through a quality assessment, for more details see Appendix C.

A number of 'protective factors'² were identified which could be used to filter any high risk population identified. These factors include: marriage, particularly a cohesive or 'good' marriage before the age of 25 (6 studies) and employment (5 studies).

The REA also identified literature on many existing violent risk assessment tools that have been developed to try and predict the risk of reoffending, typically in prisons or forensic psychiatric units. Most of the tools identified use a combination of clinical and actuarial measures. Clinical data such as the offender's response to questionnaires and behavioural indicators would not be readily available to the police and so such tools have been excluded from the REA. Where the tools use actuarial data –such as age - that would be available, the factors included in the tools have been examined and found to be largely consistent with those identified separately in the REA. These tools have been discussed within the report.

² Protective factors are those which appear to reduce an individual's likelihood of offending.

1. Introduction

Identification of potentially dangerous people can allow police forces to be aware of, and if appropriate engage with these individuals to manage the risk to the public. The ultimate purpose of identifying such a group would be to reduce repeat offending and protect the public through preventing future potential harm.

This paper presents findings of a rapid evidence assessment designed to explore the evidence base on factors associated with, or predictive of, known serious or persistent violent offending, excluding domestic and sexual violence, for which there are already existing offender management processes. Predicting future offending based on factors associated with known serious offending provides an indication of relative risk, that is how much more likely offenders with certain characteristics (such as previous convictions for violent offending) are to commit a further offence compared with other offenders. However, an increased relative risk does not mean that all offenders with that characteristic necessarily go on to commit further offences.

2. Methods

The evidence assessment has followed systematic principles, but is not exhaustive and may be biased towards published sources rather than grey literature. The time constraints have limited the review to published evidence for which electronic abstracts were available and contained within databases held by the Police National Library¹. The searches were limited to papers written in or after 1990. In addition, strict inclusion criteria have been applied so that only evidence using appropriate methods is included². From over 5,000 references identified by the searches, 50 papers met the inclusion criteria and these have been summarised in this paper. Academic experts in the field were also contacted and three of the papers which they recommended were also included, where they fit the search criteria, giving a total of 53 studies. The review excluded studies that focused on domestic violence and sexual violence as these were out of scope for this study, Appendix D contains relevant definitions. Full details of the method are contained in Appendix B.

The report also includes 14 additional papers found through earlier scoping or from references within the 53 papers. These additional 14 papers were not captured through the REA due to being outside of the time period or outside of the search terms, but they do provide useful supporting material. Throughout the report we make it clear when the findings have come from the REA and when they have come from additional or background reading. All the papers found through the REA have been reviewed and weighted according to quality criteria³ of the study. For each factor the strength of the evidence (either positive or negative) is presented, that is the number of studies which discuss this finding and how these studies were graded by quality (grade one having the fewest limitations, grade three having the most limitations but still of a quality that is sufficient to meet the inclusion criteria). For a full explanation of how this grading system was applied see appendix C.

Research Material Available

On the basis of this targeted review, the evidence base on the factors associated with serious or persistent violent offending comes mainly from longitudinal cohort studies⁴. There have been a number of major cohort studies⁵ on which much of the criminal career research is based including:

- The Glueck's Unravelling Juvenile Delinquency Study – Boston, USA (see Sampson and Laub, 2003) 500 delinquent and 500 non-delinquent males from Massachusetts in the 1930s.
- The Cambridge Study in Delinquent Development – Cambridge, England (See Piquero et al, 2007) 411 London males selected at ages 8-9 years from registers of 6 state primary schools.
- The Pittsburgh Youth Study – Pittsburgh, USA (see Loeber et al, 2003) 1,517 boys in Pittsburgh public schools aged 7, 10 and 13 years.

Thirteen out of the 53 papers used in this REA were based on evidence from longitudinal studies. Much of the remaining research uses one or more of the following methodologies: meta analyses (6 papers), cohort studies (20 papers) or snapshots from different countries of criminal record, conviction or arrest data (e.g. Home Office Offenders Index) for the general offending population or specific groups of offenders (17 papers). As the systematic search focussed on English language papers the majority of the studies are from the North America and the UK with the remainder coming from European countries.

In comparing results from studies of offenders or criminal careers it is important to take account of the differences between the studies, in particular the measurements used to establish levels of offending. When estimating re-offending rates different studies have used various follow-up periods which will affect the comparability of the results. Studies have also used a range of measures including arrests, convictions or self-reported offending for estimating offending rates all of which have different limitations. Many of the studies used in the REA are based on conviction data as this is most readily available to researchers. However convictions may not be an accurate representation of actual offending, for example one study on attrition rates between arrests and convictions found that, of those in the sample who were arrested only 40 per cent were convicted⁶. For cohort studies it is also important to understand where and when the cohort sample was taken from and if that particular group is representative of other birth years and locations. Another issue is that if the longitudinal study covers many years it may also reflect changes in society's view of certain issues - for example someone is more likely to be arrested and charged with domestic violence now than in the past. These limitations would need to be considered when using the factors to identify high risk offenders.

The majority of the studies mentioned in this paper relate to male offenders, as such the findings reported below are applicable primarily to male offenders. Where the findings are applicable to female offenders this has been stated.

Finally it should be noted that many of the key terms used within the literature for this REA in relation to offenders, for example 'persistent', 'chronic' or 'serious', were often not clearly defined within the papers and differed from study to study. Where definitions have been available they are provided in Appendix D.

3. Existing risk assessment tools

There are many existing risk assessment tools that have been developed to try and predict the risk of reoffending both generally and for specific types of crimes such as violence and sexual reoffending (for a full discussion see Harris and Rice (2007) and Kemshall (2002)⁷). Risk assessments tend to include measures that are clinical (such as personality questions) and/or dynamic (such as employment status) in nature as is the case for all the tools listed in Table 1 below. They are typically used with long term prisoners or in forensic psychiatric units on an individual basis (for a discussion of these different methods and their merits see Leam et al (2008). This REA is focused on identifying factors that could be used by the police to prioritise offenders from the data on offenders available to them.

The most commonly used risk assessment tools were the subject of a 2011 meta-analysis⁸ - there are other tools in existence but this gives a helpful overview of the field. The study aimed to identify which of these tools were most effective at predicting reoffending. A brief summary of the most commonly used risk assessment tools taken from this meta-analysis is included below:

Table 1: Characteristics of the risk assessment tools⁹

Tool	Description/purpose
Level Service Inventory- Revised (LSI-R) ¹⁰	Designed to use psychosocial status to predict the likelihood of general recidivism in adult offenders. The tool is designed to assist professionals make decisions regarding level of supervision and treatment.
Psychopathy Check list – Revised (PCL-R) ¹¹	Designed to diagnose psychopathy as operationally defined in Cleckley’s (1941)
Sex Offender Risk Appraisal Guide (SORAG) ¹²	Designed to assess the likelihood of violent (including sexual) recidivism specifically in previously convicted sex offenders.
Static-99 ¹³	Designed to predict the long term probability of sexual recidivism amongst adult male offenders who have committed a sexual offence.
Violence Risk Appraisal Guide (VRAG) ¹⁴	Designed to be used to predict risk of violence in previously violent mentally disordered offenders.
Historical Clinical Risk Management - 20 (HCR-20) ¹⁵	Designed to assess violence risk in forensic, criminal justice and civil psychiatric settings.
Sexual Violence Risk – 20 (SVR-20) ¹⁶	Designed to predict the risk of violence (including sexual violence) in sex offenders.
Spousal Assault Risk Assessment (SARA) ¹⁷	Designed to predict future violent in men arrested for spousal assault.
Structured Assessment of Violence Risk in Youth (SAVRY) ¹⁸	Designed to assess the risk of violence in adolescents.

The study found that the tool designed to detect violence risk in juveniles, the Structured Assessment of Violence Risk in Youth (SAVRY), produced the highest

rates of predictive validity and the least was the Level Service Inventory-Revised (LSI-R) and Psychopathy Check list – Revised (PCL-R). However, a key finding of this paper is that all of these tools are more effective at assessing risk in specific populations than in more general populations.

Many papers identified during the search of the databases related to the evaluation and comparison of risk assessment tools that predict violent reoffending. Where such studies included the use of data, such as clinical data, that is unlikely to be consistently available to the police in a form that could be searched to identify high risk offenders, they were excluded from this REA. Consequently, they were not considered to be relevant to the present study.

There are however, some risk assessment systems identified that do not include clinical measures and focus primarily on static actuarial measures. For example:

- The Offender Violent Predictor (OVP) part of the Offender Assessment System (OASys).
- The revised Offender Group Reconviction Scale (OGRS 3)
- The Risk Matrix 2000/violence

The National Offender Management Service's principal risk assessment tool OASys encompasses the OASys Violent Predictor (OVP) and uses both static factors such as criminal history and gender, and dynamic factors such as alcohol misuse, employability and accommodation¹⁹. The OVP is a reliable predictor of future violence, however, many of the dynamic factors used would not be available consistently from police held data. An alternative system based only on static actuarial measures is the revised Offender Group Reconviction Scale (OGRS 3). OGRS 3 uses several factors some of which were similar to those identified in this REA; age at start of at risk period (i.e. non custodial sentence or discharge from custody), current offence, the Copas Rate³ and sanctioning history²⁰. OGRS 3 has been found to be as predictive of violent offending as general offending. Finally, the Risk Matrix 2000 developed by Thornton et al²¹ to create a scale for predicting sexual and non-sexual violent recidivism in sex offenders that could be scored on information that was more easily available and used simpler coding rules but without loss of predictive accuracy. The prediction of non-sexual violence in this measure uses the factors; age on release, number of prior violent appearances and whether the offender has any convictions for burglary. The Risk Matrix 2000/V has been cross-validated and found to be a very good predictor of violence recidivism²².

The predictive ability of these risk assessment systems will be considered as part of the testing process. However, there are issues that would require revalidation of these models; the models were developed using conviction data and some were developed on specific sub-groups of offenders such as sex offenders. Consequently, these models may not have the same predictive ability when used to identify the most risky serial violent offenders on police held data.

Structure of the report

The following section will discuss each of the factors identified in the literature as being associated with serious or persistent violent offending. The final section

³ The Copas Rate is a logarithmic function based on number of previous sanctions and time between current and first sanction)

summarises the findings of the REA. The consistency and strength of the evidence is shown throughout the paper and a summary table of evidence is included in appendix A. Appendix D contains definitions of some of the key terms used in this report.

4. Findings

4.1 Age and Age-Related Factors

Research has shown that offending rates peak in middle to late adolescence for most offences, and drop sharply and permanently thereafter. This pattern in offending is known as the age-crime-curve and has been identified using all major measures of offending such as self-report, conviction and victimisation data²³. Studies show that there is some variation in the age-crime-curve across crime types. In a comprehensive study of crime and ageing in men²⁴ it was found that violent offending peaked at a later age than property offending and decreased more slowly but it was at about half its peak at age 40 and at zero by age 65²⁵. Other studies have found that the career length of violent offenders was longer than for property or drug offenders²⁶. Explanations for the age-crime-curve have included maturation – a general growing up and out of juvenile criminal behaviour²⁷, the impact of life events at the end of adolescence such as marriage and a decrease in time spent with peers²⁸.

Age of first offence is predictive of chronic or persistent criminal offending

Consistency and strength of evidence: 5 studies including - Grade one studies (1), grade two studies (3), grade three studies (1)

The age of first offence is an important predictor of the severity of criminal careers²⁹. Evidence suggests that those who commit offences at age 14 or earlier have significantly different future offending careers³⁰.

- A review of evidence on age of onset found that the majority of persistent, serious offenders first committed serious non-violent offences between the ages of 7-14 years old³¹.
- The earlier a male offender has his first conviction the more likely he is to be convicted again; one study found that almost 60 percent of male offenders first convicted at the age of ten were convicted of further offences within five years.
- The relationship with age is not as strong for female offenders³².

Age of first offence is predictive of chronic or persistent violent offending

Consistency and strength of evidence: 9 studies including - Grade one studies (4), grade two studies (3), grade three studies (2)

There is strong evidence to suggest that early onset offending is predictive not only of a persistent or chronic criminal career but also of a violent or more dangerous criminal career³³.

- A meta-analysis of 57 studies found that, compared to non recidivists³⁴, violent recidivists were younger at the age of index offence³⁵.
- When compared with other possible predictors of violent behaviour, including family, social and educational factors, a juvenile offence between the ages of 6-11 years was found to be the strongest predictor of subsequent violent behaviour³⁶.
- Offenders who commit any offence by the age of 14 years were found to be more likely to engage in later serious and violent offending³⁷, with some studies estimating this to be up to three times more likely³⁸. There are variations in the evidence however with one study suggesting that an arrest by age 16 was the best predictor of later violent recidivism³⁹.

Although there is strong evidence from the literature that starting to offend at a young age is predictive of both a chronic and/or violent criminal career, not all chronic and violent offenders will be those who commit their first offence at an early age. At best these studies can highlight how particular factors can increase the risk of an individual committing a violent offence; it is not possible to say categorically someone who offends at a young age will continue to offend. In a study of 500 adult career criminals, it was found that while early onset was undoubtedly important, 62 percent of the offenders with extensive (general) criminal careers in the study were not initially arrested until adulthood⁴⁰.

A study that examined the criminal careers of 786 men convicted of murder found that only 20 percent of the sample were early onset offenders – defined as those who had been convicted of at least one criminal act before the age of 13⁴¹. However, 67 percent of the sample were classified as late onset offenders – having committed at least one criminal act after the age of 13. The remainder (13 percent) had no offending prior to the murder. Research has shown that a reasonable proportion of serious offenders begin their criminal careers late in adolescence or in early adulthood, therefore a flag which highlights those who begin to offend at a young age cannot be guaranteed to identify all serial violent offenders.

4.2 Criminal history

Individuals who commit more than one offence are termed recidivists. Studies show that for general offending half of all male offenders were recidivists⁴², compared to 20-25 per cent of violent offenders⁴³. There is evidence from a number of studies to show that the probability of another arrest increases with each subsequent arrest. Of those who do reoffend, recidivism tends to peak in mid-adolescence before tailing off in late adolescence, similar to the age-crime-curve discussed above⁴⁴. There are two key findings from the review that relate to the criminal history of violent offenders⁴⁵.

- 1) Men with a long criminal career (in any crime type) are more likely to commit violent offences⁴⁶.

Consistency and strength of the evidence: 7 studies including - Grade one studies (5), grade three studies (1) and one non REA study (see appendix A).

- One study found that 70 per cent of persistent general offenders had one or more convictions for violent crime⁴⁷.

- The total number of offences⁴⁸ has been found to be linked to the likelihood of re-arrest for any offence and for a violent offence⁴⁹.
- A study of adolescent offenders found that boys with three or more arrests for any crime were nearly five times as likely to have an arrest for violence as those with two arrests. Furthermore when this study compared the violent arrestees with the non violent arrestees, it was found that the violent group had almost twice as many arrests⁵⁰.
- A long criminal career in any crime type being predictive of future violence, does not appear to hold for female offenders⁵¹.

2) A **violent** criminal history is a strong predictor of later violent recidivism⁵².

Consistency and strength of the evidence: 10 studies including - Grade one studies (5), grade two studies (3), grade three studies (2)

- One study which compared several predictors of violent recidivism, found that past violent behaviour was the strongest predictor of later violent behaviour. This was found to hold true for male and female offenders⁵³.
- In a cohort of 1,157 released violent offenders, 65 per cent of them were re-arrested three quarters of which for a serious offence⁵⁴.
- One study which looked specifically at recidivist violent offenders found that 73 per cent of the recidivists in the sample were re-arrested for a serious offence, and the most serious and most violent offenders had the highest rate of re-arrest⁵⁵.
- Violent offenders have been found to be more than twice as likely to engage in further violent offences as non-violent offenders⁵⁶.
- Violent offenders with high number of arrests are more likely to commit further violent crime⁵⁷ (non-REA study).
- One study found that recidivism was more common among those who had committed a multi-injury assault as their first offence⁵⁸.

These two findings are central to the debate on whether specialisation (the degree to which offenders commit only one type of crime or collection of crimes⁵⁹) in violent offending exists. There are two schools of thought that could be supported by the evidence presented above. Some suggest that there is no specialisation in violent offenders but rather those who commit a lot of offences will inevitably commit violent offences as a part of their repertoire⁶⁰.

Other studies suggest that there is evidence of 'specialism' in violent crime. This argument suggests that violent offenders do specialise and are therefore likely to continue to commit more violent offences⁶¹. In reality there could be a mix of general and specialist offending with one study finding evidence of specialisation in later careers of young offenders that was not evident early on⁶².

In summary, there is evidence for both theories; that there are violent specialists and that the more prolific an offender the more violence they will commit. It is also possible that there are other factors whose influence have not been fully analysed such as the higher detection rate for violent crimes⁶³. From the literature identified in this study it is not clear whether individuals with a long criminal career commit more or less violent offences than those who specialise in violent crime. This however is an area would need to be explored further before being used as a flag.

Specific Offences

Consistency and strength of the evidence: 3 studies including - Grade one studies (1), grade two studies (1), grade three studies (1)

There is some evidence to suggest that a specific number of crime types are associated with an increased relative risk of further specific offending. Offences of manslaughter, blackmail and kidnapping were found to significantly increase the relative risk of a subsequent conviction for murder⁶⁴. Being an offender who had been convicted of murder or a related offence⁶⁵ was associated with the likelihood of subsequent re-arrest for any offence⁶⁶. One study which focussed upon kidnapping found that of those with a conviction for kidnapping, 1 out of every 100 was convicted of homicide and two out of every 100 was convicted of rape within 20 years of first kidnapping offence, and kidnappers are over 30 times more likely than the general population to be convicted of homicide and four times more likely than sex offenders⁶⁷.

4.3 Social factors

Substance abuse

Early drug or alcohol abuse is related to violent offending⁶⁸ and further subsequent arrests for serious crime including but not limited to violence⁶⁹.

Substance abuse at a young age

Consistency and strength of the evidence: 4 studies including - Grade one studies (2), grade two studies (2)

Substance abuse at a young age⁷⁰ and particularly before age 11 years was found to be particularly predictive of future violence⁷¹. Drug use in adolescence has been linked to time spent with delinquent peer groups and the two factors combined have been found to lead to violent behaviour in later life⁷². Adolescents classed as 'frequent drinkers' were 2.4 times more likely to have a violent arrest than 'light' or 'non drinkers'⁷³.

Substance abuse in adulthood

Consistency and strength of the evidence 6 studies including - Grade one studies (3), Grade two studies (2), grade three studies (1)

Regarding adult offenders, evidence of the link between drug use and violent recidivism is mixed. Studies have found that drug use had a significant relationship with criminal recidivism for both men⁷⁴ and women⁷⁵, which includes crimes of violence. But another study only found a relationship where self reported violent recidivism data was used but not with official data⁷⁶. Further studies found that substance abuse is associated with violent offending when combined with other factors, for example low intelligence⁷⁷ and personality disorders⁷⁸. Drug and alcohol abuse have been found to be factors that can have a negative impact on the desistance effect of other life events⁷⁹. This is discussed further in the section on 'Protective Factors'.

Family factors

Consistency and strength of the evidence: 6 studies including - Grade one studies (3), Grade two studies (1), grade three studies (2)

There is limited evidence that being from a single parent family⁸⁰ or having criminal parents⁸¹ contributes to the risk of later persistent and/or serious violent offending⁸². Divorce during childhood was found in one study to double the risk of repeated violent offending⁸³. Other family factors that have been found to be predictors of later violent offending include being the child of a teenage parent, being placed in care outside of the home, violence in the family, paternal lack of education and maternal alcohol abuse⁸⁴. A study which compared adolescents arrested for violence with adolescents arrested for other non-violent offences, found no significant difference in family background between the two groups. However significant differences were found between both offending groups and the non-offending group⁸⁵. This finding suggests that family factors are associated with offending in general rather than violent offending specifically. Young offenders who have been imprisoned, who had suffered emotional abuse at the hands of parents or guardians were more likely to incur further arrests for a serious crime after being released⁸⁶.

Much of this evidence is, however, from studies that focused on family and social factors only. When considered alongside other factors it was found that family was one factor among several and was a weaker predictor than previous offences and substance abuse⁸⁷. Most studies agree that family factors contribute to a risk of later delinquency and criminal behaviour but only when combined with other factors.

Antisocial behaviour

Consistency and strength of the evidence: 4 studies including - Grade one studies (4)

Antisocial behaviour at a young age and in the context of being part of an antisocial peer group was found to predict violent offending⁸⁸. One study which compared violent with general offenders found both groups demonstrated antisocial behaviours at a higher level than the comparison group⁸⁹, suggesting that antisocial behaviour predicts chronic offending but not violence specifically⁹⁰. In adults, anti-social personality traits distinguished violent recidivists from non-violent recidivists and non-recidivists⁹¹.

Few studies were found by the REA that showed antisocial behaviour as being a factor linked to violent behaviour, but those that were found scored highly. Despite this antisocial behaviour is not one of the key findings of this REA for several reasons. Firstly, only one of the studies considered findings from the UK, secondly the term antisocial behaviour used in these studies included a diverse range of antisocial behaviours and antisocial personality traits. Lastly antisocial behaviour is unlikely to be consistently recorded in police held data.

Gang involvement

Consistency and strength of the evidence: 5 studies including - Grade one studies (2), Grade two studies (1), grade three studies (2)

There is some evidence that gang involvement is a predictor of violent recidivism. In a study of 2,792 violent offenders released from prison, 6.8 per cent were gang members, furthermore gang membership was found to be a significant predictor of future violence committed outside of the family⁹². Another study which looked at male and female offenders found that being in a gang increased the risk of serious and or violent offending for both genders but in females the increase was 2.3 times and in males it was 1.5 times⁹³. A study looking at violent offenders released from prison found that being gang affiliated and having committed a gang-related offence was significantly and positively related to the risk of re-arrest⁹⁴, although gang behaviour did not predict criminal career length⁹⁵. In a review of several studies gang members were found to be more involved with serious and violent delinquency than non gang members, however it is not possible to say whether being part of this gang led to violent delinquency or these individuals would have been involved in violence without the gang⁹⁶.

4.4 Protective factors

Marriage

Consistency and strength of the evidence: 6 studies including - Grade one studies (2), grade two studies (4)

Marriage appears to increase the chances that an offender will desist from violent offending particularly a 'good' marriage (one characterised by cohesiveness) and one made before age 25⁹⁷. This marriage effect has been found to exist for both men and women⁹⁸. One study⁹⁹ found that the effect of a good marriage takes time to appear and has a greater impact the longer the marriage lasts¹⁰⁰. A comprehensive study of released offenders, found that a common characteristic of the offenders that had committed the most violent crimes, was having never been married¹⁰¹.

Strong social bonds and attachments to individuals such as spouses, close friends and family have been found to be a protective factor which buffers or mitigates the risk of violent offending¹⁰², but only where these individuals are not involved in criminality or drug use themselves¹⁰³. This finding is supported by further evidence that the desistance impact of marriage may not be as strong in certain social groups¹⁰⁴ and that drug abuse may reduce the impact¹⁰⁵. Much of the research on criminal careers and desistance has been conducted using cohorts who grew up before the 1970s so it was possible that this finding was due to marriage over this period being more common at an early age. However, recent research has shown that if anything the desistance impact of marriage is stronger now than in earlier periods¹⁰⁶.

As an explanation of why marriage has this impact Warr (1993), (study not identified through the REA) suggested that the desistance effect of marriage may be because time spent with peers has been found to decline dramatically after marriage¹⁰⁷ and previous research by the same author suggested that the age curve of frequency of offending matches the curve of time spent with peers. An alternative explanation is that the marriage effect is self selecting and that those who are more likely to change their behaviours are the ones who get married¹⁰⁸. This theory suggests that the protective factor is not marriage itself, but the factor that leads individuals to get married, as such marriage is a filter for identifying individuals who desist.

Employment

Consistency and strength of the evidence: 5 studies including - Grade one studies (2), grade two studies (2), grade three studies (1)

There is mixed evidence on the association of employment history, education level and socio-economic status with violent recidivism¹⁰⁹. In a study of a large Danish birth cohort it was found that low education and unemployment was typical among violent offenders in the sample¹¹⁰. There is some evidence to suggest that although these factors may be significant predictors of initial criminal behaviour they do not distinguish individuals who repeat offend¹¹¹. However other evidence from arrest records has found that offenders from low income areas were more likely to repeat offend¹¹², and individuals in subjectively more rewarding jobs were less involved in violent and property related crime¹¹³.

Gender

Consistency and strength of the evidence: 7 studies including - Grade one studies (2), grade two studies (5)

The focus on male offenders is due to the strong evidence suggesting that there are more male violent offenders than female¹¹⁴. Women, compared with men, commit fewer criminal acts, typically have a criminal career of less than a year, and are more likely to commit only one offence¹¹⁵. The few studies that consider male and female offending show women commit fewer violent offences¹¹⁶. One study found that the only factor that distinguished between frequent violent offenders and frequent non-violent offenders was gender, with males being significantly more likely to be in the frequent violent offending group¹¹⁷.

A number of factors appear to have different predictive ability depending on gender such as criminal history, sentence length and history of abuse¹¹⁸. Further factors which vary depending on gender are summarised below:

- Men with the longest criminal history are amongst those most likely to recidivate with violence. In contrast, criminal history did not significantly predict violent recidivism in women¹¹⁹.
- Men serving longer sentences were less likely to be violent recidivists while women serving longer sentences were at a greater risk for violent recidivism¹²⁰.

- In a study of juvenile offenders, being in secure detention decreased the risk of violent offending by 24 per cent for males but had no statistically significant effect for females¹²¹.
- One study found that in females a history of being abused and neglected was statistically linked to the likelihood of arrest for a violent crime compared to the control group¹²². While another found that experience of abuse and maltreatment decreased the risk of violent offending in male and female juveniles¹²³. Abused and neglected males were statistically more likely to be arrested for a non-violent rather than a violent crime¹²⁴.
- Gang involvement increased the likelihood of serious and or violent offending 2.3 times in females but only 1.5 times in males¹²⁵.

3. Summary

The rapid evidence assessment has identified several factors that appear to be associated with serious or persistent violent offending primarily by males. Evidence suggests that men are significantly more likely than females to be involved in crime in general and violent crime specifically so in any system using factors to prioritise offenders, sex should be considered first.

The evidence identified by this REA points to several factors that appear to be predictive of future serious or persistent violent offending. Firstly, individuals who begin offending before the age of 14 are more likely to have a serious criminal career and are more likely to engage in violent offending. The longer the criminal career, the more likely the offender is to commit a violent crime and offenders with a history of violence are more likely to commit more acts of violence than those without. Although, those offenders with early onset offending appear to be more likely to go on to have serious violent criminal careers not all serious violent offenders have this trajectory. Identifying those whose offending onset is later but are likely to become serious offenders seems more problematic as there appears to be less evidence available and less consistency in the behaviour of this group. In addition, those factors that are likely to be associated with such late onset careers may be less easily operationalised using police held data as they may lie in a lack of strong social bonds in adulthood such as marriage and employment – information not consistently recorded.

There is some evidence to suggest that some specific crimes – kidnapping, blackmail and manslaughter – are predictive of future specific serious violent offences. Substance abuse at a young age has been found to be a predictor of later violent and other criminal offending. The evidence linking violence with other family and social factors is weaker although may be relevant in conjunction with other factors. There is also limited evidence that gang involvement may also be a factor increasing the likelihood of future violent offending.

The full range of factors are summarised in Appendix A but those with the greatest potential for use by police are:

- early onset of offending in any crime (before age 14)
- long criminal career, chronic/persistent offending history
- having previous convictions for violent offending

In addition there are several 'protective factors' which could be used to filter any high risk population identified. For example close social bonds with spouses, family and friends has been found to be a protective factor where those individuals are not involved in crime or drugs themselves and a good marriage before the age of 25, in particular, increases the likelihood of an offender desisting from crime. There is also some limited evidence that being in employment also has a desistance effect. Finally, the age of the offender must also be taken into account as the age crime curve shows us that in general offenders tend to desist or offend less frequently as they get older with their offending rate tending to decrease gradually from their early twenties.

It should also be noted that many of the factors identified as being predictive of violent offending are also predictive of persistent or chronic offending.

Regarding these findings, and as a final cautionary note, it should be emphasised that not all offenders with the characteristic(s) described above necessarily go on to commit further offences, but there is a higher likelihood that they will. While the majority of studies have highlighted the risk posed by early onset offending, other studies have found that late-onset offenders can also become prolific or chronic offenders.

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Introduction

¹ Staff at the National Police Library searched the following databases: ASSIA; EconLit; ERIC; CJA; PsychInfo; PBS; IBSS; Emerald; NCJRS; Web of Knowledge.

² Full details of the search strategy including databases search and inclusion/exclusion criteria are set out in Annex B.

³ Strength of the evidence was assessed by reviewing the appropriateness of the sample size used, structural or methodological limitations and the appropriateness of the analysis used.

⁴ Longitudinal cohort studies track a selected sample of people from one point in time onwards or sometimes retrospectively.

⁵ For a full description of these major cohort studies see Soothill, K; Fitzpatrick, C; Francis B (2009) *Understanding criminal careers* Cullompton, Devon: Willan Publishing and Bruinsma, G; Elfers, H; Keijser, J Cullompton (2004) "Peers, Crime and the Life-course" Chapter 17 by Mark Warr in *Punishment, places and perpetrators: developments in criminology and criminal justice research*. Devon: Willan Publishing

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²⁹ Ibid Harris et al (2007)

³⁰ De Lisi, M (2006) "Zeroing in on early arrest onset: results from a population of extreme career criminals" *Source Journal of Criminal Justice*, Volume. 34 no. 1, 2006. Ibid Ezell, M. E. (2007).

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³² Prime, J; White, S; Liriano S; Patel K (2001) "Criminal careers of those born between 1953 and 1978. Home Office statistical Bulletin 4/01, Also See Farrington et al 2006 Home Office Research Study 299 which was not found through the REA but through earlier scoping work.

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³⁴ Those who had committed only one offence.

³⁵ Collins, R (2010) "The effect of gender on violent and non-violent recidivism: A meta analysis", *Journal of Criminal Justice* 38 675-684.

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⁴⁵ It should be noted that while this evidence was attained from studies found through the REA, it is also supported by Brennan et al (1989) a frequently quoted study which, due to its date of publication, fell outside of our search criteria.

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⁴⁷ Farrington et al (2009)

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⁴⁹ Ibid Trulson et al (2011)

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⁶⁵ The study in question is an American study and used the term *homicide-related offences*. This included capital murder, attempted capital murder, murder, attempted murder, criminally negligent homicide, and voluntary manslaughter. Taken from Trulson et al (2011) p263.

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⁹⁰ The Capaldi et al (1996) study used three groups, the "violent group" had three or more arrests including one for violence, the "non-violent group" which had three or more arrests but none for violence and a comparison group that had fewer than three arrests or no arrests.

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APPENDIX A – Evidence found through the REA

Inclusion Factor	Key finding	Country	Reference	Strength of evidence
Male gender	<p>Males are more likely to be involved in violent offending</p> <p>Males were significantly more likely to be in the frequent, violent offending group.</p> <p>Women reported less violent behaviour than men</p> <p>The percentage of men born in 1953 convicted of a 'standard list' offence by the age of 46 is 33% compared to 9% for females</p>	<p>USA</p> <p>USA</p> <p>UK</p>	<p>Piquero, A. (2000)</p> <p>Brook et al (2011)</p> <p>Prime et al (2001)</p>	<p>1 (Analysis of the Philadelphia perinatal collaborative project 987 participants. A longitudinal study with subjects up until the age of 17)</p> <p>1 (study of urban ethnic minority students in USA N=1332. A longitudinal study using four waves of data at age 14, 19, 24, and 29)</p> <p>2 (descriptive data of 6 birth cohorts taken from the Home Office offenders index examining all criminal conviction of those bore in 1953, 1958, 1963, 1968, 1973 and 1978. Data goes up to 1999)</p>
Age	<p>Frequency of offending is affected by age</p> <p>Although age at release (used as a proxy for age) was a predictor of violent recidivism, it was consistently a worse predictor than age at first offence</p>	Canada	Harris (2007)	<p>2 (Three non overlapping samples of male offenders n=1,300 previously reported in other studies. Sample one n=143</p>

				follow up after 7 years, sample two n=396 follow up after 5 years and sample three n=799 follow up after 10 years.)
Early age of onset (before 14)	<p>The earlier the age of onset the more serious the criminal career.</p> <p>In regression analyses, age fourteen was significantly predictive of chronicity, dangerousness, offending frequency, career span and violence specialization.</p> <p>There was a significant relationship between age of onset and career length, individuals beginning their career earlier had longer careers. Those who had their first arrest by the age of 12 had a criminal career of on average 20.95 years where as those who had their first arrest after the age of 16 had the shortest criminal career (13.97)</p> <p>The earlier a male offender has his first conviction the more likely he is to be convicted again. Almost 60% of male offenders born in 1953 who were first convicted at the age of ten were convicted of further offences within five years. The relationship with age is not so strong for female offenders.</p>	<p>USA</p> <p>USA</p> <p>UK</p>	<p>De Lisi, (2006)</p> <p>Ezell, M. E. (2007)</p> <p>Prime et al (2000)</p>	<p>1 (interviews and official crime records of 500 frequent offenders. Frequent offenders were criminals with more than 30 arrest charges).</p> <p>2 (longitudinal study following a random sample of 1,957 offenders released from prison in 1981-2 into their 30s)</p> <p>2 (descriptive data of 6 birth cohorts taken from the Home Office offenders index examining all criminal conviction of those bore in 1953, 1958, 1963, 1968, 1973 and 1978. Data goes up to 1999)</p>

	<p>The probability of desistance is inversely related to the age of onset</p>	USA	Loeber et al (2008)	<p>2 (analysis of repeat follow ups between the age of 7 and 25 of 1,009 inner city boys in the Pittsburgh youth longitudinal study)</p>
	<p>The majority of the persistent serious offenders first committed serious non-violent offences between the ages of 7 and 14</p>	USA	Loeber et al (1998)	<p>3 (summary of a meta analysis of papers 13 cohort studies of serious violent juvenile offenders)</p>
	<p>The earlier the age of onset the more likely the offender is to be a violent offender</p> <p>The age of index offence was younger for violent recidivists versus non-recidivists, and this difference was larger in studies with (a) a smaller proportion of Caucasian participants, and (b) with a longer follow up period</p> <p>Those arrested prior to age 14 had a greater prevalence and frequency of subsequent violent and gun arrests that those arrested for the first time at age 14 or later. Early starters were nearly 3 times as likely to be arrested for a violent crime compared to late starters.</p> <p>Age at first arrest is positively correlated with the target variable (OR =0.87; 0.90, P<.01) signifying that juveniles who were older at the time of their first offence are less likely to recidivate with a violent offence</p>	Canada	Collins, R, E, (2010)	<p>1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)</p>
	<p>Those arrested prior to age 14 had a greater prevalence and frequency of subsequent violent and gun arrests that those arrested for the first time at age 14 or later. Early starters were nearly 3 times as likely to be arrested for a violent crime compared to late starters.</p>	USA	McCluskey et al (2006)	<p>3 (study of a birth cohort of 1159 arrestees all born in 1979, records examined for each between 1989 and 1998)</p>
	<p>Age at first arrest is positively correlated with the target variable (OR =0.87; 0.90, P<.01) signifying that juveniles who were older at the time of their first offence are less likely to recidivate with a violent offence</p>	USA	Grunwald et al (2010)	<p>3 (Study of 7,061 male juveniles who entered community programmes in Philadelphia between 1996-2002)</p>

	<p>The most violent offenders were first arrested at ages 14 or 15.</p>	USA	De Lisi (2006)	<p>1 (interviews and official crime records of 500 frequent offenders. Frequent offenders were criminals with more than 30 arrest charges).</p>
	<p>A juvenile offence at ages 6-11 is the strongest predictor of subsequent violent offending</p>	USA, UK, Scandinavia	Lipsey and Derzon (1998)	<p>1 (meta analysis of 34 published and unpublished studies containing 200-500 predominantly male subjects aged between 6-14)</p>
	<p>It was found that 70% persistent offenders (those with convictions at age 10-20 and again at 21-50) had at least one conviction for a violent offence compared to 34% of late onset offenders and 15% of adolescent limited offenders.</p>	UK	Farrington et al (2009)	<p>2 (analysis of the Cambridge Study of Delinquent development n=411 boys from London)</p>
	<p>Individuals who begin offending at earlier ages engage in significantly more violent co-offences</p>	USA	McGloin, J. M; Piquero, A.R; (2009)	<p>2 (study of a random sample of 400 delinquents from the population of all official records of those arrested in Philadelphia in 1987. Average number of offences per individual was 3.0)</p>
	<p>The age of first offence or of having been arrested under the age of 16 was the best predictor of violent recidivism. Age of index offence and age of release were also consistently related to recidivism.</p>	Canada	Harris et al (2007)	<p>2 (Three non overlapping samples of male offenders n=1,300 previously reported in other studies. Sample one n=143 follow up after 7 years, sample</p>

	<p>It was found that 62% of the offenders with extensive criminal careers in the study were not initially arrested until adulthood</p> <p>20% of the sample was early onset offenders (those who had committed at least one criminal act before the age of 13). 67 percent of the sample was classified as late onset offenders – having committed at least one criminal act after the age of 13. 13 percent had no offending prior to the murder.</p>	<p>USA</p> <p>UK</p>	<p>De Lisi (2006)</p> <p>Dobash et al (2007)</p>	<p>two n=396 follow up after 5 years and sample three n=799 follow up after 10 years.)</p> <p>1 (interviews and official crime records of 500 frequent offenders. Frequent offenders were criminals with more than 30 arrest charges).</p> <p>2 (A sample of 786 convicted male murderers using the 'Murder in Britain' data which came from three sources: the existing national homicide indexes, primary data gathered from the case files and in-depth interviews with men and women currently in prison for murder.)</p>
<p>Previous convictions/ long criminal history</p>	<p>The longer the criminal history the more likely the offender is to commit violent offences</p> <p>In men those with the greatest criminal history are among those most likely to recidivate with violence. Criminal history did not significantly predict violent recidivism in women.</p> <p>They found no evidence of individuals in the study specialising in violence with the strongest predictor of whether a participant</p>	<p>Canada</p> <p>USA</p>	<p>Collins, R, E, (2010)</p> <p>Piquero, A. (2000)</p>	<p>1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)</p> <p>1 (Analysis of the Philadelphia perinatal collaborative project 987 participants. A longitudinal</p>

	<p>incurred a violent offence by age 18 was offence frequency</p> <p>The total number of individual juvenile court appearances prior to imprisonment was positively related to the risk of re arrest for any offence and also for a felony arrest.</p> <p>The probability of another arrest increases with each subsequent arrest</p> <p>The probability of committing a violent offence increases with the number of offences committed.</p> <p>The risk of recidivism increased significantly when detention was imposed at a young age.</p> <p>Boys with three or more arrests for any crime were nearly five times as likely to have an arrest for violence as those with two arrests.</p>	<p>USA</p> <p>USA / UK</p> <p>UK</p> <p>USA</p> <p>USA</p>	<p>Trulson et al (2011)</p> <p>Tolan et al (1998)</p> <p>Farrington (2009)</p> <p>Van der put et al (2011)</p> <p>Capaldi et al (1996) (not found through REA)</p>	<p>study with subjects up until the age of 17)</p> <p>1 (Analysis of the recidivism outcomes of 1804 serious male violent offenders released from juvenile detention in 2004 in US)</p> <p>1 (meta-analysis of studies describing serious and violent juvenile offenders)</p> <p>(This finding was from Farrington 1991, which was not Captured in the REA)</p> <p>3 (Study is based on official records of 1,393 juveniles charged with criminal offences aged 12-18 years)</p> <p>1. (Study based 206 adolescents. Compared three groups of adolescent offenders: the 'violent group' 3 or more arrests including violence, the 'non-violent group' three or more arrests none for violence and a comparison group that had fewer than three arrests or no arrests)</p>
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	Offenders in the sample with at least one violent arrest had almost twice as many arrests as those with no violent arrests.	USA	Capaldi et al (1996) (not found through REA)	1. (Study based 206 adolescents. Compared three groups of adolescent offenders: the 'violent group' 3 or more arrests including violence, the 'non-violent group' three or more arrests none for violence and a comparison group that had fewer than three arrests or no arrests)
Violent Criminal history	<p>Offenders with a violent criminal history are more likely to recidivate violently than those without</p> <p>Violent recidivism was associated with the longest criminal history. This was especially true of violent criminal history which remained the strongest predictor of violent recidivists.</p> <p>Whether offenders were generalized aggressors as opposed to family only aggressors emerged as the strongest predictor of violent recidivism. The number of prior arrests for violent crimes was an important predictor of violent recidivism.</p> <p>The study showed that a cohort of violent offenders compiled a significant record of violent crimes in the 17 years after their arrest for a violent crime - an indicators of specialisation</p>	Canada	Collins, R, E, (2010)	1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)
		USA	Stalans et al (2004)	1 (sample of 1,344 violent adult offenders on probation. This sample represents all those discharged between Oct 30, 2000 and Nov 30, 2000.)
		USA	Martinez (1997)	1 (analysis of a cohort of 342 individuals arrested for an index violent crime whose cases were disposed of in 1973. Followed period was 17 years later in 1991)

	<p>Violent behaviour at an earlier time period had the greatest predictive effect on violent behaviour at a later time period. There was no significant difference in the effect for Males than females.</p>	USA	Brook (2011)	1 (study of urban ethnic minority students in USA N=1332. A longitudinal study using four waves of data at age 14, 19, 24, and 29)
	<p>65% of the released violent offenders were re-arrested although a quarter of these were only for a minor offence. 73 per cent of the recidivists were re-arrested for a serious offence, and the most serious and most violent offenders had the highest rate of re-arrest.</p>	USA	Trulson et al (2011)	1 (Analysis of the recidivism outcomes of 1804 serious male violent offenders released from juvenile detention in 2004)
	<p>When those committed to prison for a violent crime recidivate, it is more likely they recidivate (43.7%) for a new violent offence than for property, sex, drug or other offences. A violent commitment offence is a significant predictor of violent recidivism for the cohort.</p>	USA	Schwanert (1998)	2 (Cohort of 3,353 parolees released from Ohio Department of Rehabilitation and Correction in 1989. The majority had been incarcerated for a serious offence).
	<p>Some offences show little specialisation early in youth careers but appear later as offences increase. This is the case with violence and theft offences</p>	Canada	Williams et al (2002)	2 (analysis of official police data, specifically of a sample of 191 police contact reports)
	<p>Specialists in violence committed 55-79% of violent offences but only 15-34% of the non violent offences. Specialists in non-violence committed 8-26% of violent offences but 53-77% of non violent offences.</p>	USA	Osgood and Shreck (2007)	2 (analysis of data from three studies, "Monitoring the future" n=7190, Montreal study n=736 and G.R.E.A.T study 1501n = 9427)

	<p>Having committed a prior violent offence increases the likelihood of reoffending with a similar violent offence.</p> <p>54% of those who had committed assault which led to 9 or more injuries as their first crime went on to commit at least one more offence. The remainder committed no further crimes.</p>	<p>USA</p> <p>Estonia</p>	<p>Grunwald, et al (2010)</p> <p>Kompus (2006)</p>	<p>3 (Study of 7,061 male juveniles who entered community programmes in Philadelphia between 1996-2002)</p> <p>3 (Analysis of 467 violent cases that were processed at the City Court Estonia in 1986 and 1996)</p>
<p>Conviction for kidnapping, blackmail, manslaughter, arson and threats to kill.</p>	<p>Offenders convicted of some specific crimes are more likely to commit future serious violent crimes</p> <p>Found that being a homicide related offender was significant and positively related to the risk of subsequent arrest for any offence and also for a felony arrest.</p> <p>When compared with the general criminal population it is 12 times as likely that a man with a previous manslaughter conviction will be subsequently convicted of the murder of a family member; that a man with a blackmail conviction will be subsequently convicted of a murder of an acquaintance; or that a man with a kidnapping conviction will be subsequently convicted of the murder of a stranger male victim.</p>	<p>USA</p> <p>UK</p>	<p>Trulson et al (2011)</p> <p>Soothill (2002) (not found through REA)</p>	<p>1 (Analysis of the recidivism outcomes of 1804 serious male violent offenders released from juvenile detention in 2004 in US)</p> <p>1 (Data analysed of all those convicted of murder, rape or serious sexual assault of an adult female between 1995-1997. Details for all murders were also matched with the Home office Homicide Index)</p>

	Those with a conviction for kidnapping, are over 30 times more likely than males in the general population to be convicted of homicide and four times more likely than sex offenders.	UK	Soothill (2008)	3 (Analysis of the convictions of 31,456 individuals from six birth cohorts in the Offenders Index: these people aged 16 to 20 years during the early 1970s, late 1970s, early 1980s, late 1980s, early 1990s and late 1990s)
Drug and alcohol use	<p>Drugs and alcohol at an early age are predictive of later violent offending. Drug and alcohol abuse later in life reduce the desistance impact of some life changes</p> <p>Substance abuse at age 6-11 was a strong predictor of subsequent violent offending.</p> <p>Drug use displayed a large positive and highly significant relationship to violent recidivism which showed no significant gender differences.</p> <p>Peer delinquency was linked with contemporaneous illegal drug use in late adolescence which in turn predicted the continuity of violence perpetration</p> <p>Offenders categorised as substance abusers</p>	<p>USA, UK, Scandinavia</p> <p>Canada</p> <p>USA</p> <p>USA</p>	<p>Lipsey and Derzon (1998)</p> <p>Collins, R, E, (2010)</p> <p>Brook et al (2011)</p> <p>Trulson et al</p>	<p>1 (meta analysis of 34 published and unpublished studies containing 200-500 predominantly male subjects aged between 6-14)</p> <p>1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)</p> <p>1 (study of urban ethnic minority students in USA N=1332. A longitudinal study using four waves of data at age 14, 19, 24, and 29)</p> <p>1 (Analysis of the recidivism</p>

	<p>on entering prison were more likely to commit a serious offence (including but not limited to violence) after release.</p>		(2011)	<p>outcomes of 1804 serious male violent offenders released from juvenile detention in 2004 in US)</p>
	<p>Personality disorders (PD) and substance use disorders (SUD) lead to high violent criminality. Sixty-nine percent of offenders with PD and SUD, showed any recidivism.</p>	Switzerland	Walter et al (2011)	<p>1 (379 offenders who were subject to court orders for forensics psychiatric evaluation from Forensic Psychiatry clinic of the university of Basel)</p>
	<p>Frequent adolescent drinkers were 2.39 times as likely to have a violent arrest as were light or non drinkers.</p>	USA	Green et al (2011)	<p>2 (longitudinal epidemiological study of a community cohort of urban African Americans followed from age 6 to 42 N = 702; 51% female)</p>
	<p>Substance abuse problems made serious violent and chronic delinquency more likely for girls and boys</p>	USA	Johannsson et al (2009)	<p>2 (analysis of the criminal histories of 10,450 offenders (1/3 female) in USA referred to juvenile court in Texas between 2002-2003)</p>
	<p>Prevalence of violence increases significantly at low intelligence and high alcohol consumption levels. The combination of heavy drinking and lower intelligence is associated with a synergistic surge of violent behaviour.</p>	USA	Welte et al (1998)	<p>2 (data from the Buffalo Longitudinal Study of Young Men (BLSYM) random sample of 625 men aged 16-19. Follow up period was 18 months)</p>
	<p>Drugs and alcohol were related to the persistence in offending of later-married men and they can have an impact on offending, regardless of the quality of intimate</p>	UK	Theobald & Farrington (2011)	<p>2 (Uses a sub set from the Cambridge cohort)</p>

	<p>relationships.</p> <p>Methamphetamine use was significantly predictive of self-reported violent criminal behaviour and general recidivism (i.e., a return to custody for any reason). However, methamphetamine use was not significantly predictive of being returned to custody for a violent offence.</p> <p>Close intact interpersonal relationships are not protective when these relationships are with persons who are themselves criminals drug abusers or violent.</p>	<p>USA</p> <p>UK</p>	<p>Cartier et al (2006)</p> <p>Ullrich & Coid (2011)</p>	<p>3 (uses data from 641 state prison parolees in California to examine the associations between methamphetamine use and three measures of criminal behaviour).</p> <p>3 (Data from "The Prisoner Cohort Study" - a cohort of potentially high-risk offenders. Sample chosen from the highest risk bracket under the OGRS scale. Follow up was on average 9.5 months after release.)</p>
Gang involvement	<p>Involvement in gangs increases the probability of violent recidivism</p> <p>Gang membership was found to be a significant predictor of future violence committed outside of the family</p> <p>Being gang affiliated and having committed a gang-related offence was significantly and positively related to the risk of re-arrest for any offence.</p> <p>Gang behaviour was found to be robustly non-significant at predicting criminal career length.</p>	<p>USA</p> <p>USA</p> <p>USA</p>	<p>Stalans et al (2004)</p> <p>Trulson et al (2011)</p> <p>Ezell (2007)</p>	<p>1 (sample of 1,344 violent adult offenders on probation. This sample represents all those discharged between Oct 30, 2000 and Nov 30, 2000.)</p> <p>1 (Analysis of the recidivism outcomes of 1804 serious male violent offenders released from juvenile detention in 2004 in US)</p> <p>2 (longitudinal study following a random sample of 1,957</p>

	<p>(A long criminal career is linked to increased likelihood of committing a violent crime see page 24)</p> <p>Gang members were found to be more involved with serious and violent delinquency than non gang members.</p> <p>Being in a gang increased the risk of serious and or violent offending for both genders but in females the increase was 2.3 times and in males 1.5 times</p>	<p>USA / UK</p> <p>USA</p>	<p>Thornberry (1998)</p> <p>Johansson et al (2009)</p>	<p>offenders released from prison in 1981-2 into their 30s)</p> <p>3 (review of four longitudinal studies on gangs. No indication given in study of method of selection)</p> <p>3 (analysis of the criminal histories of 10,450 offenders (1/3 female) in USA referred to juvenile court in Texas between 2002-2003)</p>
Socio economic factors	No degree level education and unemployment in the previous year are typical among violent offenders.	Denmark	Christoffersen et al (2003)	3 (analysis of a cohort of males born in 1966. Those who committed violent offences between the ages of 15-27 were compared with a control group who were similar in all aspects except that they had not been convicted of a violent crime.)
Disturbed family background	<p>Disturbed family background increases the likelihood of a child committing future violent offences</p> <p>Offenders categorised as having been emotionally abused at the hands of their parent or guardian on entering prison was more likely to commit a serious offence (including but not limited to violence) after</p>	USA	Trulson et al (2011)	1 (Analysis of the recidivism outcomes of 1804 serious male violent offenders released from juvenile detention in 2004 in US)

<p>release.</p> <p>Parental divorce and unmarried single mothers increased the risk of repeated violent offending. The risk with regard to repeat violent offending was highest, being nearly eightfold, if the child was born to a single mother who remained unmarried at least up to the child's 14th birthday.</p> <p>Family break up, teenage parenthood, child placement outside of the home, violence in the family, paternal criminality and mothers' alcohol abuse, fathers' lack of vocational training are risk factors for first time conviction for a violent offence.</p> <p>A study comparing multiple predictive factors found that being from a broken home was predictive of later violent offending, however this was one factor among several and was a weaker predictor than factors such as previous offences and substance abuse</p> <p>A study which compared adolescents arrested for violence with adolescent arrested for other non-violent offences, found no significant difference in family background between the two groups. Significant differences were found between both offending groups and the non-</p>	<p>Finland</p> <p>Denmark</p> <p>New Zealand</p> <p>USA</p>	<p>Koskinen et al (2001),</p> <p>Christoffersen, et al (2003)</p> <p>Fergusson et al (2004)</p> <p>Capaldi et al (1996) (not found through REA)</p>	<p>2 (Used data from a birth cohort of 96% of males born in 1966 in northern Finland. The present study is of 5589 males from this cohort at age 14, 16 and 32.)</p> <p>3 (analysis of a cohort of males born in 1966. Those who committed violent offences between the ages of 15-27 were compared with a control group who were similar in all aspects except that they had not been convicted of a violent crime.)</p> <p>3 (Christchurch Health and Development Study - a longitudinal study of a birth cohort of 1,256 children born in Christchurch, New Zealand in mid-1977)</p> <p>1. (Study based 206 adolescents. Compared three groups of adolescent offenders: the 'violent group' 3 or more arrests including violence, the 'non-violent group' three or more arrests none for</p>
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	offending group			violence and a comparison group that had fewer than three arrests or no arrests)
Anti-social behaviour	<p>Involvement in anti-social behaviour and delinquency as an adolescent predicts involvement in violent offending later.</p> <p>Involvement with an antisocial peer group at age 12-14 strongly predicted violent offending</p> <p>Ant-social personality traits distinguished violent recidivists from non-violent recidivists and non-recidivists (data only available for men)</p> <p>Affiliation with delinquent peers, who advocated drug use predicted the participants externalising behaviours and had a large total effect on the participants violent behaviour</p> <p>Violent offenders and general offenders both demonstrated antisocial behaviours at a higher level than the comparison group</p>	<p>USA, UK, Scandinavia</p> <p>Canada</p> <p>USA</p> <p>USA</p>	<p>Lipsey and Derzon (1998)</p> <p>Collins, R, E, (2010)</p> <p>Brook et al (2011)</p> <p>Capaldi et al (1996) (not found through REA)</p>	<p>1 (meta analysis of 34 published and unpublished studies containing 200-500 predominantly male subjects aged between 6-14)</p> <p>1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)</p> <p>1 (study of urban ethnic minority students in USA N=1332. A longitudinal study using four waves of data at age 14, 19, 24, and 29)</p> <p>1. (Study based 206 adolescents. Compared three groups of adolescent offenders: the 'violent group' 3 or more arrests including violence, the 'non-violent group' three or more arrests none for violence and a comparison group</p>

				that had fewer than three arrests or no arrests)
Parental criminality	Family criminality was found to be robustly non-significant at predicting criminal career length	USA	Ezell (2007)	2 (longitudinal study following a random sample of 1,957 offenders released from prison in 1981-2 into their 30s)
	Parental criminality is a significant predictor of violent reoffending	USA	Grunwald et al (2010),	3 (Study of 7,061 male juveniles who entered community programmes in Philadelphia between 1996-2002)
Exposure to violence	Individuals who were exposed to violence (through direct or vicarious victimisation) were more likely to engage in chronic violent behaviour.	USA	Spano et al (2010)	2 (Five waves of longitudinal data collected as part of Mobile Youth Survey in the USA).
PROTECTIVE FACTORS				
Marriage	A 'good' marriage and one made before age 25 can have a desistance effect	Canada	Collins (2010)	1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)
	A comprehensive statistical analysis of over 3000 released offenders, identified that a characteristic of one of the high risk groups for violent recidivism was having never been married.	USA	Stalans et al (2004)	1 (sample of 1,344 violent adult offenders on probation. This sample represents all those discharged between Oct 30, 2000 and Nov 30, 2000.)
	One study found that the effect of a good	UK	Laub &	2 (Uses a sub set from the

	<p>marriage (one characterised by cohesiveness) takes time to appear but has been found to lead to a growing preventative effect</p> <p>The study found support for the idea that marriage reduces offending across gender and socio-historical context. Notably, we find that the reduction in the risk of offending due to marriage is significantly greater for individuals in the most contemporary context.</p> <p>Strong social support was found to be a significant predictor of desistance.</p> <p>Even after controlling for stable individual differences, marriage is found to be negatively associated with nonviolent, but not violent, arrests for Whites and non-Whites alike.</p> <p>The marriage affect is self selecting and that those who are more likely to change their behaviours are the ones who get married</p>	<p>Netherlands</p> <p>Netherlands</p> <p>USA</p> <p>UK</p>	<p>Sampson (1993)</p> <p>Bersani and Laub et al (2009)</p> <p>Lodewijks et al (2009)</p> <p>Piquero et al (2002)</p> <p>Theobald & Farrington (2011)</p>	<p>Cambridge cohort) referenced in Theobald & Farrington 2011</p> <p>2 (Study using 4% of all cases for criminal offences in 1977 in Netherlands)</p> <p>2 (three samples included male adolescents in different stages of the judicial process: total n = 224)</p> <p>2 (Longitudinal data are obtained for 524 parolees, who were followed for 7 consecutive years after their release from the California Youth Authority)</p> <p>2 (Uses a sub set from the Cambridge cohort)</p>
Employment	<p>Employment history, education level and socio-economic status have no relationship with either recidivism or violence.</p> <p>Offenders from low income areas were more likely to recidivate.</p>	<p>Canada</p> <p>USA</p>	<p>Collins, R, E, (2010)</p> <p>Martinez (1997)</p>	<p>1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)</p> <p>1 (sample of 342 people arrest for violent offences in Columbus</p>

	<p>After controlling for previous criminal behaviour and a host of other factors, it was found that individuals working in more subjectively rewarding jobs and those receiving vacation and retirement benefits were less involved in violent and property related criminal behaviour.</p> <p>For both general recidivism and violent re-offending - employment emerged as the most significant correlate</p> <p>Low employment is typical among violent offenders.</p>	USA	Wadsworth (2006)	and cases disposed in 1973) 2 (Study using National Longitudinal Study of Youth 1979 and 1980 waves)
		Canada	Yeager (2004)	2 (random sample of 24% of adult, male prisoners released from Canadian federal prisons in 1983-1984 and followed for a period of 3 years)
		Denmark	Christoffersen et al (2003)	3 (analysis of the 1966 Danish birth cohort study n=43,403)
Length of previous sentences	In men, sentence length had a significant negative relationship to recidivism That is- men serving longer sentences were less likely to be violent recidivists.	Canada	Collins (2010)	1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)
Level of education	Levels of education are low among violent offenders.	Denmark	Christoffersen et al (2003)	3 (study using 1966 Danish birth cohort)
	For employment history, education level and socio-economic status, there appears to be no relationship with either recidivism or violence.	Canada	Collins, R, E, (2010)	1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic

				variables, and statistics)
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Female only findings

Factor	Key finding		Reference	Strength of evidence
Frequency of offending	Women, compared to men, commit fewer criminal acts, typically have a criminal career of less than a year, and are more likely to commit only one offence.	UK	Prime et al (2000)	2 (descriptive data of 6 birth cohorts taken from the Home Office offenders index examining all criminal conviction of those bore in 1953, 1958, 1963, 1968, 1973 and 1978. Data goes up to 1999)
	Women also commit fewer violent criminal offences.	USA	Johansson et al (2009)	2 (analysis of the criminal histories of 10,450 offenders (1/3 female) in USA referred to juvenile court in Texas between 2002-2003)
Serving long sentences	Women serving longer sentences were at a greater risk for violent recidivism.	Canada	Collins (2010)	1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including recidivism rates, demographic variables, and statistics)
	Experience of secure detention had no significant effect for females.	USA	Johansson et al (2009)	2 (analysis of the criminal histories of 10,450 offenders (1/3 female) in USA referred to juvenile court in Texas between 2002-2003)
Criminal history	Criminal history did not significantly predict violent recidivism in women.	Canada	Collins (2010)	1 (meta-analysis of 57 published studies selected against a strict set of criteria such as including

				recidivism rates, demographic variables, and statistics)
Abuse and neglect	<p>It was found that abused and neglected females, but not males, are at significantly higher risk for arrests for violent crimes than control group subjects.</p> <p>Contrary to expectations the coefficients for abuse and maltreatment were negative; thereby indicating that experience of abuse decreases the risk of offending for males and females.</p>	<p>USA</p> <p>USA</p>	<p>Widom and White (1997)</p> <p>Johansson et al (2009)</p>	<p>2 Prospective cohort of abused and neglected children matched to control group</p> <p>2 (analysis of the criminal histories of 10,450 offenders (1/3 female) in USA referred to juvenile court in Texas between 2002-2003)</p>

APPENDIX B – Details of the searching and sifting criteria

Systematic searches were carried out to identify evidence on the factors associated with, or predictive of, serious or persistent violent offending. Relevant databases held by the National Police Library were searched as well as consulting with subject matter experts⁴. The searches were limited to English language papers written in or after 1990. The search criteria are set out below.

Search terms

Two sets of search terms were used one to identify literature relating to violent offending, criminal careers and predictive factors (table 1) and one to identify risk and protective factors. The sets of terms were combined in the searches.

Table 1: Search terms relating to violent offending, criminal careers and predictive factors

Search terms	Synonyms
Violent offending	Violence, violent, violent offending, violent behaviour, violent criminal history, violent recidivism, violent reoffending, perpetrators of violence
Criminal career	Life course persistent offending, chronic offending, persistence, desistance, adolescent limited offending, long-term high rate offenders, recidivism, persistence, desistance, maturation, disruption, specialisation, diversification, versatility, reconviction
Predictive factors	Protective factors, risk factors, risk assessment, Life events, marriage, employment, years of education, criminal justice sanctions, age of onset, anti-social behaviour, substance abuse, violence assessment.

Table 1: Search terms relating to risk/protective factors

Search terms	Synonyms
Predictive factors	Protective factors, risk factors, risk assessment, Life events, marriage, employment, years of education, criminal justice sanctions, age of onset, anti-social behaviour, substance abuse, risk reduction
Age	Age of onset, index offence, age at first arrest, age at first conviction
Marriage	Married
Employment	Job, unemployed, unemployment, employed, training
Education	Years of education, schooling, higher education, truancy
Criminal justice sanction	Caution, conviction, imprisonment, arrested
Antisocial behaviour	Anger, poor self control, antisocial attitudes, delinquency, truancy, vandalism, criminal damage, gangs, ASBO
Substance abuse	Drug abuse, alcohol abuse, addiction
Gender	Female, girl, women

Sifting

Abstracts were sifted for relevance and then a second sift was undertaken following examination of the full article on the following criteria:

- Relevant to the study i.e. about predictors of violent recidivism
- Includes quantitative data and uses appropriate statistical tests

⁴ Staff at the National Police Library searched the following databases: ASSIA; EconLit; ERIC; CJA; PsychInfo; PBS; IBSS; Emerald; NCJRS; Web of Knowledge.

- Included only literature published in peer review journals

Table 2 below records the number of abstracts sited for each database

Name of database	Total reference	Included after abstract review
British Library search	420	4
CSA Illumina	1,682	5
National Police Library	201	17
NCJRS	11	0
Web of Knowledge	816	10
Emerald	196	0
EBSCO	1875	14
Total	5,201	50

16 Papers did not arrive in time to be included in the REA.

Eight additional papers were included, three of which were recommended by subject matter experts (denoted by an *) and the remainder were referenced in other papers. These did not contain terms which would have allowed them to be identified by our search criteria but were useful as additional evidence:

Brennan, P, Mednick, S, John, R (1989) *Specialisation in Violence: Evidence of a criminal subgroup* Criminology Volume.27 (3)

*Capaldi D & Patterson G (1996) Can Violent Offenders be Distinguished from Frequent Offenders: Prediction from Childhood to Adolescence. Journal of Research in Crime and Delinquency Volume 33 no. 2 206-231.

Gendreau, P., Little, T. and Goggin, C. (1996), *A Meta-Analysis of The Predictors of Adult Offender Recidivism: What Works!.* Criminology, 34: 575–608.

Kemshall, H, (2002) *“Risk Assessment and Management of Serious Violent and Sexual offenders: A review of current issues”* De Montford University Scottish Executive Social Research

Laub, J. H. and Sampson, R. J. (1993) *Turning points in the life-course: why change matters to the study of crime* Criminology Volume.31, Page:301-26

Laub, J. H., & Sampson, R. J. (2003). *Shared beginnings, divergent lives.* Cambridge, MA: Harvard University Press

*Liu, J, Francis B & Soothill K (2008) *Kidnapping offenders: Their risk of escalation to repeat offending and other serious crime* pages 164-179 Journal of Forensic Psychiatry & psychology Volume 19, Issue 2, 2008.

*Soothill K, Francis B, Ackerly E, and Fligelstone R. (2002) *Murder and serious sexual Assault: What criminal histories can reveal about future serious offending.* Police Research Series Paper 144 Home Office

Warr M (1993) *Age, Peers and Delinquency.* Criminology Volume.31 No.1 1993

Background sources

The following are background sources that were used in the initial research for the REA but were not subsequently found through the REA. Four of these are pre-1990 therefore would not have been identified by the search criteria.

Budd T, Sharp C and Mayhew P (2003) *Offending in England and Wales: First results from the 2003 Crime and Justice Survey*, Home Office Research Study 275

Blumstein A; Cohen J (1987) *Characterizing Criminal Careers Science*, New Series, Volume. 237, No. 4818. (Aug. 28, 1987), pp. 985-991.

Farrington, D. P. (1986) *Stepping stones to adult criminal careers*. In Olweus, D., Block, J. and Yarrow, M.R. (Eds) *Development of Antisocial and Prosocial Behaviour: Research, Theories and Issues*. New York: Academic Press pp.359-384.

Flatley, et al (2010) *Crime in England and Wales 2009/10* Home Office Statistical Bulletin 2010

Hales, J; Nevill, C; Pudney, S; Tipping, S (2009) '*Longitudinal analysis of the Offending, Crime and Justice Survey 2003-06*'. Source London: Home Office, Research Development and Statistics Directorate, 2009 Home Office Research Report 19.

Hirschi, T. and Gottfredson, M. (1983) '*Age and the Explanation of crime*', in *American Journal of Sociology*, No. 89, pp552-84,

Kemshall, H, (2002) "*Risk Assessment and Management of Serious Violent and Sexual offenders: A review of current issues*" De Montford University Scottish Executive Social Research

Phillips, C & Brown, D (1998) "Entry into the Criminal Justice system: A survey of police arrests and their outcomes" Home Office Research Study 185. London: Home Office.

Wilson, J.Q. & Herrnstein, R. (1985). *Crime and Human Nature*. New York: Simon and Schuster

Evidence in this review comes from 10 different countries. Several papers featured evidence from more than one country, therefore were 13 studies from the UK, 31 from the USA, 6 from Canada, 1 from Estonia, 2 from Denmark, 1 from Finland, 1 from New Zealand, 2 from the Netherlands and 1 from Switzerland. All were published studies and were either meta- analysis (6 papers) or cohort studies (20 papers), or longitudinal studies (13 papers) or studies based on a sample of official data (17 papers).

Appendix C: Categorising studies for final report.

Studies

Most studies will have some kind of limitation which will impact the reliability of the reported findings. Only studies that were found to be sufficiently robust have been used in this study and any relevant limitations have been noted. For ease we have categorised each study as being a level one, two or three. Level one being studies with few limitations. These limitations fall into three criteria:

A) Appropriateness of sample size

A sample of between 100-500 is the minimum considered to be acceptable to carry out statistical tests. Less than 100 would only be suitable where the effect sizes were very large.

B) Structural or methodological limitations

The study has few reported limitations or issues regarding the method used in the study.

C) Strength of analysis.

Good analysis would have reported the effect size (a measure of the strength of the relationship between two variables in a population). The strongest analysis will also include information on the overall evaluation of the logistic model, the statistical tests of predictors, goodness of fit statistic and an assessment of the predicted probabilities (Peng, Lee & Ingersoll, 2002)⁵.

To determine the quality of the study each one has been evaluated against these three criteria and categorised as described below.

A level one study: meets all three criteria

(e.g. Has used an appropriate sample size, has few structural or methodological limitations and the strength of the analysis used is good)

Level two: Meets two of the criteria

(e.g. It may use an appropriate sample size and have few methodological limitations but the analysis is weak)

or

e.g. It may use an appropriate sample size and the analysis is strong, but there is one or more major methodological limitation to the study.

Level three: Meets one of the criteria

(e.g. Has an appropriate sample size but the analysis is weak and there are several methodological limitations.)

Level four: Meets none of the criteria, therefore the study will be excluded.

⁵ Peng, Lee & Ingersoll (2002) *An Introduction to Logistic Regression Analysis and Reporting*, The Journal of Educational Research 96 (1).

Appendix D: Definitions

Throughout the report certain key terms have been used such as “criminal career”, “persistent” and “serious offender”. A definition of these terms is given below.

Criminal Career

Farrington describes a criminal career as “the longitudinal sequence of offences committed by an individual offender”⁶ as apposed to a career-criminal who makes a living out of criminal behaviour. Much of the literature references this explanation and this is the one applied in this report⁷.

Persistent offender

There appears to be no agreed definition of what constitutes a persistent offender⁸. However, a common theme is that of offenders who commit numerous offences in a short space of time. For example, in a 2004 report into persistent and prolific offenders the Home Office definition used was “someone who is 18 years or over and has been convicted of six or more recordable offences in the last 12 months”⁹. In this report no strict definition is applied in terms of number of offences committed during a specified period of time. Rather we apply a broader definition used in much of literature of “a group of the offending population [that] is convicted of disproportionately more crime than the rest of the offending population”¹⁰.

Violent offender/violent crimes

Violent crimes are those offences contained in part 1 schedule 15 of the Criminal Justice Act 2003 which includes robbery, kidnapping, and a group of violence against the person offences ranging from assault without injury, through wounding and attempted homicide. In this report where we refer to a violent offender this is an individual who has committed one or more of these offences.

Serious violence

Serious violence is a term used to describe the more harmful end of the violence spectrum and is generally differentiated from less serious violence by the severity of punishment imposed for that particular crime¹¹. Both in police recorded data and the British Crime Survey, violence is categorised as either

⁶ Farrington, D. P. (1997) Human development and criminal careers. In Maguire, M., Morgan, R. and Reiner, R. (Eds.) *The Oxford Handbook of Criminology* (2nd ed.). Oxford: Clarendon Press (pp. 361-408).

⁷ For further discussion see Chapter 9 “Human Development and Criminal Careers” *Oxford handbook of Criminology* 2nd eds and the introduction to Soothill, K; Fitzpatrick, C; Francis B (2009) *Understanding criminal careers* Cullompton, Devon: Willan Publishing.

⁸ Loeber, R; Farrington, D. P. and Waschbusch, D. A. *Serious and Violent Juvenile Offenders* in Loeber, R; Farrington, D P *Serious and violent juvenile offenders: risk factors and successful interventions:1998*, Soothill, K; Fitzpatrick, C; Francis B (2009) *Understanding criminal careers* Cullompton, Devon: Willan Publishing.

⁹ Home Office Communications Directorate (2004) *Joint Inspection Report into Persistent and Prolific Offenders* London: Home Office. Quoted in Soothill et al (2009)

¹⁰ Page 82 Soothill, K; Fitzpatrick, C; Francis B (2009) *Understanding criminal careers* Cullompton, Devon: Willan Publishing

¹¹ Soothill, K; Fitzpatrick, C; Francis B (2009) *Understanding criminal careers* Cullompton, Devon: Willan Publishing.

violence with injury or violence without injury¹². Violent crimes that cause injury usually receive a more punitive response than those without injury. In this report serious violence refers to violence with injury.

¹² **Home Office** (2011) *User Guide to Home Office Crime Statistics*. London: Home Office.
<http://www.homeoffice.gov.uk/publications/science-research-statistics/research-statistics/crimeresearch/user-guide-crime-statistics/>