

Home Office Research Study 299

Criminal careers up to age 50 and life success up to age 48: new findings from the Cambridge Study in Delinquent Development

2nd edition

David P. Farrington, Jeremy W. Coid, Louise M. Harnett, Darrick Jolliffe,
Nadine Soteriou, Richard E. Turner and Donald J. West

*The views expressed in this report are those of the authors, not necessarily
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Home Office Research, Development and Statistics Directorate
September 2006

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First published 2006

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ISBN 10 1-84726-108-6

ISBN 13 978-84726-108-3

ISSN 0072-6435

Abstract

The Cambridge Study in Delinquent Development is a prospective longitudinal survey of 411 South London males first studied at age eight in 1961. The main aims of this report are to advance knowledge about conviction careers up to age 50 and life success up to age 48, at which age 93 per cent of the males were personally interviewed.

Forty-one per cent of the males were convicted, with an average nine-year conviction career containing five convictions for standard list offences (excluding motoring offences). A small fraction (7%) of the males accounted for over half of all convictions among the Study males. Just over a quarter (29%) of the men had been convicted for one of eight offence types in four age ranges, compared with 93 per cent who self-reported at least one of these offence types. There were on average 39 self-reported offences per conviction. The males who were first convicted at the earliest ages tended to have the most convictions and the longest criminal careers.

Nine criteria of life success were measured comparably at ages 32 and 48. The proportion of men leading successful lives increased, from 78 per cent at age 32 to 88 per cent at age 48. Men who had desisted from offending before age 21 were very similar to the unconvicted men in their life success at age 48, and the persistent offenders were the least successful.

The most important childhood (age 8–10) risk factors for later offending were measures of family criminality, daring, low school attainment, poverty and poor parenting. Based on these results, risk assessment instruments could be developed and risk-focussed prevention could be implemented. Cognitive-behavioural skills training programmes, parent training, pre-school intellectual enrichment programmes and home visiting programmes are effective.

Acknowledgements

The Cambridge Study in Delinquent Development was initially directed by Donald West, who collaborated fully in this long-term follow-up study. David Farrington joined the Study in 1969 and took over as Director in 1982.

The Study has been funded mainly by the Home Office and also by the Department of Health. This report describes results obtained in a social interview at age 48 directed by David Farrington and funded by the Home Office. The men were also given a psychiatric interview at age 48 (directed by Jeremy Coid), and their female partners were interviewed (directed by Terrie Moffitt), with funding from the National Programme on Forensic Mental Health of the Department of Health. Results obtained with these other interviews will be reported elsewhere.

David Farrington was primarily responsible for analysing the data collected in the age 48 social interview and for writing this report. Darrick Jolliffe assisted with the analyses. Louise Harnett, Nadine Soteriou and Richard Turner searched for the men and conducted the interviews. The project was housed in the Forensic Psychiatry Research Unit at St. Bartholomew's Hospital under the general supervision of Jeremy Coid. The data were computerized by Group Sigma. The searches of criminal records were carried out by Debbie Wilson, Andrew Kalinsky and Maya Devi Power of the Home Office. This report was expertly word processed by Maureen Brown. Our greatest debt is to the Study males for their continued remarkable level of cooperation over a 40-year period.

David Farrington

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Executive summary

The main aims of this report are to advance knowledge about conviction careers up to age 50 and life success up to age 48. The Cambridge Study in Delinquent Development is a prospective longitudinal survey of 411 London males from age 8 to age 48. At age 48, 93 per cent of the males who were still alive were interviewed. The Study is unique especially in (a) following up hundreds of children in a community sample for 40 years, (b) focussing on offending, (c) including more than five personal interviews spanning the period from childhood to the forties, and (d) having a very low attrition rate.

Convictions of the males were recorded from age 10 to age 50; 41 per cent of the males were convicted for standard list offences (excluding motoring offences). The average conviction career lasted from age 19 to age 28 and contained five convictions. A small fraction of the males (7%) – the chronic offenders – accounted for over half of all the officially recorded offences (of the Study males). Each of these men had at least ten convictions. Their conviction careers lasted from age 14 to age 35 on average. The males who were first convicted at the earliest ages tended to have the most convictions and the longest criminal careers.

The Cambridge Study provides information about self-reported offending in four age ranges that can be compared with convictions for the same offences in the same time periods. Almost all of the males (93%) reported at least one of the eight types of offences (including theft, burglary, assault, drug use and vandalism) at some stage, compared with 29 per cent who were convicted for a similar offence in one of these age ranges. Continuity in offending from one age to the next was significant according to both convictions and self-reports.

For all males committing seven types of offences in the three oldest age ranges, there was an average of 39 self-reported offences per conviction. Nearly half of all self-reported offences were committed by unconvicted men. When the analysis was restricted to convicted men, there was an average of 22 self-reported offences for every conviction. This figure varies considerably by offence type but could be used in indicative “scaling-up” from convictions to crimes committed in order to estimate the benefits of intervention programmes in saving crimes.

Nine criteria of life success were measured comparably at ages 32 and 48. The fraction of men leading successful lives (who were successful on at least six of the nine criteria)

increased from 78 per cent at age 32 to 88 per cent at age 48. Persisters (those convicted both before and after age 21) improved from 42 per cent successful to 65 per cent successful; desisters (those convicted only before age 21) improved from 79 per cent successful to 96 per cent successful; and late onset offenders (those convicted only after age 21) improved from 69 per cent successful to 84 per cent successful. Desisters were very similar to unconvicted men in their life success at age 48.

The most important childhood risk factors at age 8–10 for later offending were measures of family criminality, daring or risk-taking, low school attainment, poverty and poor parenting. Late onset offenders were not well predicted by measures of background vulnerability or troublesome behaviour at age 8–10 and they were not significantly antisocial at ages 12–14 or 15–18. It seems likely that their antisocial behaviour did not develop until after age 21.

The Cambridge Study shows the extent to which different types of offenders (persisters, desisters and late onset offenders) might have been predicted in childhood, at age 8–10. Risk assessment devices could be developed based on these results. It is especially important to predict the length (or residual length) of criminal careers to ensure that valuable prison space is not wasted by incarcerating persons who are about to stop offending. The results show that early onset is an important predictor of career length.

The Cambridge Study shows that nearly half of all offences were committed by unconvicted males. Therefore, while it would be justifiable to target intervention programmes on high-risk persons who are likely to get convicted, it would also be desirable to implement primary prevention programmes targeting the whole community.

Since most prolific offenders start early, an important policy aim should be to prevent the early onset of offending. Cognitive-behavioural skills training programmes, parent training, pre-school intellectual enrichment programmes and home visiting programmes are effective. Because offenders tend to be deviant in many aspects of their lives, early prevention that reduces offending will probably have wide-ranging benefits in reducing accommodation problems, relationship problems, employment problems, alcohol and drug problems, and aggressive behaviour. Hence, there is enormous scope for significant cost savings from effective early intervention programmes.

1.

The Cambridge Study: previous results

Sample

The Cambridge Study in Delinquent Development is a prospective longitudinal survey of the development of offending and antisocial behaviour in 411 males. At the time they were first contacted in 1961–62, these males were all living in a working class inner city area of South London. The sample was chosen by taking all the boys who were then aged 8–9 and on the registers of six state primary schools within a one mile radius of a research office that had been established. Hence, the most common year of birth of these males was 1953.

In nearly all cases (94%), their family breadwinner in 1961–62 (usually the father) had a working class occupation (skilled, semi skilled or unskilled manual worker). Most of the boys (357, or 87%) were White and of British origin, since both their parents were born and brought up in England, Scotland or Wales. Of the remainder, 14 had at least one parent from the north or south of Ireland, 12 had at least one parent of West Indian or African origin, 12 had at least one parent from Cyprus, and 16 boys had at least one parent from another country (Australia, France, Germany, Malta, Poland, Portugal, Spain and Sweden).

The major results obtained in the project between ages 8 and 40 can be found in four books (West, 1969, 1982; West and Farrington, 1973, 1977) and in summary papers by Farrington and West (1990), Farrington (1995c), and Farrington (2003). A complete list of the 145 publications (so far) from the Cambridge Study is included in the Appendix. These publications should be consulted for more details about the earlier results. Other publications cited in this report are listed in the References. This report presents the first results from the social interview given at age 48 and from the criminal record searches up to age 50.

Aims of the study

The original aims of the Study were to describe the development of delinquent and criminal behaviour in inner city males, to investigate how far it could be predicted in advance, and to explain why juvenile delinquency began, why it did or did not continue into adult crime, and why adult crime often ended as men reached their twenties. The main focus was to study continuity or discontinuity in offending behaviour and on the effects of life events on

delinquent development. The Study was not designed to test any one particular theory of delinquency but to test many different hypotheses about the causes and correlates of offending and to establish the relative importance of different predictors of antisocial behaviour. (A theory has been proposed to explain the results: see Farrington, 2005b.)

One reason for casting the net wide at the start and measuring many different variables was the belief that fashions in criminological theory changed over time and that it was important to try to measure as many variables as possible in which future researchers might be interested. Another reason for measuring a wide range of variables was the fact that long term longitudinal surveys were very uncommon, and that the value of this particular one would be enhanced if it yielded information of use not only to delinquency researchers but also to those interested in alcohol and drug use, educational difficulties, poverty and poor housing, unemployment, sexual behaviour, aggression, other social problems, and human development generally.

Methods

The Study males were interviewed and tested in their schools when they were aged about 8, 10, and 14, by male or female psychologists. They were interviewed in a research office at about 16, 18 and 21, and in their homes at about 25 and 32, by young male social science graduates. At all ages except 21 and 25, the aim was to interview the whole sample, and it was always possible to trace and interview a high proportion: 389 out of 410 still alive at age 18 (95%) and 378 out of 403 still alive at age 32 (94%), for example. Because of inadequate funding, only about half of the males were interviewed at age 21, and about a quarter at age 25. The tests in schools measured individual characteristics such as intelligence, attainment, personality, and psychomotor impulsivity, while information was collected in the interviews about such topics as living circumstances, employment histories, relationships with females, leisure activities such as drinking and fighting, and self reported offending.

In addition to interviews and tests with the males, interviews with their parents were carried out by female social workers who visited their homes. These took place about once a year from when the boy was about 8 until when he was aged 14–15 and was in his last year of compulsory education. The primary informant was the mother, although many fathers were also seen. The parents provided details about such matters as family income, family size, their employment histories, their child rearing practices (including attitudes, discipline, and parental disharmony), their degree of supervision of the boy, and his temporary or permanent separations from them.

The teachers completed questionnaires when the boys were aged about 8, 10, 12, and 14. These furnished data about their troublesome and aggressive school behaviour, their lack of concentration or restlessness, their school attainments and their truancy. Ratings were also obtained from the boys' peers when they were in the primary schools at ages eight and ten, about such topics as their daring, dishonesty, troublesomeness and popularity.

Previous findings on offending

The Cambridge Study has advanced knowledge particularly about the development of offending and antisocial behaviour from childhood to adulthood, about childhood risk factors for later offending and antisocial behaviour, and about the effects of life events on the course of development of offending. These are the three main aims of developmental criminology (Farrington, 2002b). Since this report focusses on the development of offending over time and on the relationship between offending and recent measures of life success, previous results obtained on these topics are not reviewed here.

The Study found that offending tends to be concentrated in families. While 40 per cent of Study males were convicted up to age 40 in 1993, this was also true of 28 per cent of their fathers, 13 per cent of their mothers, 43 per cent of their brothers, 12 per cent of their sisters, and nine per cent of their wives. The fact that the percentage of brothers convicted was similar to the percentage of Study males convicted suggests that the repeated interviews with the Study males had no effect on their likelihood of offending. There were on average 1.5 convicted persons out of 5.5 persons per family (or about 600 convicted persons out of 2,200 searched). While 64 per cent of families contained at least one convicted person, only six per cent of families accounted for half of all the convictions of all family members (Farrington, Barnes and Lambert, 1996).

The conviction careers of fathers and mothers (up to an average age of 70) were very different from those of the Study males. Contrary to the view that offending is heavily concentrated in the teenage years, the average age of conviction was 30 for fathers and 35 for mothers. Contrary to the view that most people who are going to offend begin before age 20, the average age of onset was 27 for fathers and 33 for mothers. One quarter of convicted fathers did not start offending until after age 35, and one quarter of convicted mothers did not start offending until after age 42 (Farrington, Lambert and West, 1998). It must, however, be borne in mind that fathers reached the peak conviction ages of 14–20 in 1937–43 on average, when many of them would have been away in the Second World War. Also, it is possible that some early convictions of fathers and mothers could have been

deleted from the Criminal Record Office before our first search in 1964. A systematic removal of files, termed “weeding”, began in 1958. For example, files of offenders aged between 40 and 70 were weeded if they had not come to the notice of the police for at least 20 years (Farrington, Lambert and West, 1998, p.90).

Contrary to the view that most offenders “grow out” of crime in their twenties, the average age of desistance was 36 for convicted fathers and 38 for convicted mothers. One quarter of convicted fathers did not stop offending until after age 45, and one quarter of convicted mothers did not stop offending until after age 48. Contrary to the view that criminal careers are relatively short, their average duration (excluding one time offenders) was 16 years for fathers and 15 years for mothers (Farrington, Lambert and West, 1998). The absence of fathers in the Second World War means that their career length may have been underestimated. When complete criminal careers are studied, officially recorded offending seems far more persistent than previously thought. However, we have no self-reported offending data from fathers or mothers.

Childhood risk factors

Before anyone was convicted, at age 8–10, the future delinquents differed from the non-delinquents in many respects, and similar results were obtained whether delinquency was based on convictions or self-reports (West and Farrington, 1973). The key risk factors at age 8–10 fell into six major categories (Farrington, 1990b), each of which independently predicted later offending: (1) disruptive child behaviour (troublesomeness or dishonesty); (2) criminality in the family (a convicted parent, a delinquent sibling); (3) low intelligence or low school attainment; (4) poor child rearing (poor discipline, poor supervision or separation of a child from a parent); (5) impulsiveness (daring or risk taking, restlessness or poor concentration); and (6) economic deprivation (low income, poor housing, large family size).

To give some idea of the extent to which convictions might be predictable in advance, a combined measure of vulnerability was developed at age 8–10, based on low family income, large family size (five or more children), a convicted parent, poor child rearing and low non-verbal IQ (90 or less). Of the 63 boys with three or more of these adverse factors, 46 (73%) were convicted up to age 32. The unconvicted boys tended to have few or no friends at age eight, suggesting that social isolation might be a protective factor against offending (Farrington *et al.*, 1988b).

Risk mechanisms

While a great deal is known about key risk factors for offending, less is known about intervening causal processes. As an example of an attempt to investigate mechanisms linking risk factors and antisocial behaviour, we tested different explanations of the relationship between disrupted families and delinquency (Juby and Farrington, 2001). Trauma theories suggest that the loss of a parent has a damaging effect on a child, most commonly because of the effect on attachment to the parent. Life course theories focus on separation as a sequence of stressful experiences, and on the effects of multiple stressors such as parental conflict, parental loss, reduced economic circumstances, changes in parent figures and poor child rearing methods. Selection theories argue that disrupted families produce delinquent children because of pre-existing differences from other families in risk factors such as parental conflict, criminal or antisocial parents, low family income or poor child rearing methods.

It was concluded that the results favoured life course theories rather than trauma or selection theories. While boys from broken homes (permanently disrupted families) were more delinquent than boys from intact homes, they were not more delinquent than boys from intact high conflict families. Interestingly, this result was replicated in Switzerland (Haas *et al.*, 2004). Overall, the most important factor was the post-disruption trajectory. Boys who remained with their mother after the separation had the same delinquency rate as boys from intact low conflict families. Boys who remained with their father, with relatives or with others (e.g. foster parents) had high delinquency rates. The results were similar whether convictions or self-reported delinquency were studied.

Effects of life events

The effects of numerous life events on the course of development of offending were investigated. In particular, going to a high delinquency rate school at age 11 did not seem to amplify the risk of offending, since badly behaved boys tended to go to the high delinquency rate schools (Farrington, 1972). However, getting convicted did lead to an increase in offending, according to the boys' self-reports (Farrington, 1977a). Unemployment also caused an increase in offending, but only for crimes leading to financial gain, such as theft, burglary, robbery and fraud. There was no effect of unemployment on other offences such as violence, vandalism or drug use, suggesting that the link between unemployment and offending was mediated by lack of money rather than boredom (Farrington *et al.*, 1986).

It is often believed that marriage to a “good woman” is one of the most effective antidotes for male offending, and indeed it was found that getting married led to a decrease in offending compared with staying single (Farrington and West, 1995). Also, later separation from a wife led to an increase in offending compared with staying married. Another protective life event was moving out of London, which led to a decrease in offending (Osborn, 1980). This was probably because of the effect of the move in breaking up delinquent groups.

Validity

Numerous tests of validity were carried out on the data collected between ages 8 and 32, in most cases based on comparisons between interview data and external information from records. For example, self-reports of convictions were compared with criminal records of convictions, and the mother’s report of the boy’s birth weight was compared with hospital records. It was shown that self-reported delinquency had predictive validity: among unconvicted males, those who reported a particular type of offence had an increased probability of being convicted for it later (Farrington, 1989d). As another example, more than twice as many of those who said that they had sexual intercourse without using contraceptives at age 18 subsequently conceived a child outside marriage as of the remainder (Farrington and West, 1995).

Reliability checks were also made. For example, information about the same topic (e.g. school leaving age) from different interviews was compared, as was information about the same topic from different parts of the same interview. Generally, the men were randomly allocated between the two or three interviewers in each data collection wave in order to investigate interviewer effects, but fortunately these were rarely found (see e.g. West and Farrington, 1977, pp. 172-175). All of these validity and reliability checks suggested that in the vast majority of cases the Study males were genuinely trying to tell the truth.

Strengths of the study

The Cambridge Study in Delinquent Development has a unique combination of features:

- a. nine personal interviews with the males have been completed over a period of 40 years, from age eight to age 48;
- b. the main focus of interest is on offending, which has been studied from age 10 to age 50;
- c. the sample size of about 400 is large enough for many statistical analyses but small enough to permit detailed case histories of the boys and their families;
- d. there has been a very low attrition rate, so that the information is very complete;
- e. Information has been obtained from multiple sources: the males, their parents, teachers, peers, and official records; and
- f. information has been obtained about a wide variety of theoretical constructs, including intelligence, impulsiveness, socio-economic status, parental child rearing methods, peer delinquency, school behaviour, employment success, marital stability, and so on.

No other survey in the world has yet followed up hundreds of children in a community sample for 40 years or more, focussing on offending, and including more than five personal interviews spanning the period from childhood to the forties. One of the most comparable surveys to the Cambridge Study is the follow up of about 700 children born on Kauai (Hawaii) in 1955 by Werner and Smith (2001), which had extensive perinatal data and four follow up contacts to age 40. However, only 70 per cent of the sample were surveyed at age 40. In the famous follow up of the Glueck delinquents by Laub and Sampson (2003), only 52 men were interviewed at age 70 out of a possible 230 still alive; no others were interviewed after age 32.

Other somewhat comparable long term surveys of offending have been conducted by LeBlanc (1996) in Canada, Magnusson in Sweden (Klinterberg *et al.* 1993), Pulkkinen in Finland (Hamalainen and Pulkkinen, 1996), and Huesmann in New York State (Huesmann *et al.*, 2006). Briefly, LeBlanc followed up over 400 males, first seen at an average age of 14, to age 40 by interviews and criminal records. Magnusson followed up over 1,000 children, first seen at age 10, to an average age of 44 using questionnaire and record data. Pulkkinen followed up nearly 400 children, first seen at age 8, to age 42, using postal questionnaires and record data. Huesmann followed up over 800 children from age 8 to age 48 using interviews and records. While all these surveys are extremely important, none had more than four personal interviews with the participants, and their attrition rates were much higher than in the Cambridge Study. For example, in the Pulkkinen study, questionnaires were completed at age 42 by 67 per cent of those who were still alive, and in the Huesmann study 61 per cent of those still alive were interviewed at age 48.

The Cambridge Study is unparalleled in its large number of personal contacts and its very low attrition rate over a 40 year period. (For a review of major prospective longitudinal studies of offending, see Farrington and Welsh, 2007.)

Limitations of the study

The Cambridge Study provides information about the development of offending and antisocial behaviour in an inner city, working class British White male sample born about 1953. To what extent similar results would be obtained with females, Black or Asian children, suburban or rural children, middle or upper class children, children born more recently, or children brought up in other countries, are interesting empirical questions. Generally, results obtained in the Cambridge Study are similar to those obtained with comparable male samples from Sweden (Farrington and Wikström, 1994), Finland (Pulkkinen, 1988), and from other Western industrialized countries (Farrington, 2006c).

The Cambridge Study has the usual methodological problems of prospective longitudinal surveys. While the problem of attrition was largely overcome, testing effects (the effects on the males of repeated interviews) are not clear. However, as mentioned, the percentage of brothers (who were never contacted) who were convicted up to age 40 was very similar to the percentage of Study males who were convicted, suggesting that the repeated interviews had little effect on convictions at least. The single cohort design made it difficult to distinguish between ageing and period effects; for example, between ages 14 and 18 the percentage of males who had taken drugs increased from less than one per cent to 31 per cent, but this was probably in part a function of the time period (from 1967 to 1971). (For a review of advantages and problems of longitudinal surveys of offending, see Farrington, 1979b.)

The sample size was too small to study rare events, such as sex offenders or low birth weight, effectively. Because of intermittent funding, the interviews were too infrequent to establish the exact or relative timing of many life events, and hence to establish developmental sequences between presumed causes and observed effects. Inevitably, some of the initial measures, based on interviews by psychiatric social workers, now appear rather old fashioned, and great efforts had to be made to achieve consistent and valid variables. Also, asking the males to recall over a five year period was not ideal but was necessary because of the infrequency of the interviews.

Summary

The Cambridge Study has advanced knowledge about the development of offending, risk factors, and the effects of life events. The Study is unique especially in (a) following up hundreds of children in a community sample for 40 years, (b) focussing on offending, (c) including more than five personal interviews spanning the period from childhood to the forties, and (d) having a very low attrition rate. This chapter has briefly mentioned only a few previous results. The publications listed in the Appendix should be consulted for details of numerous other findings.

Aims

The main aims of the long-term follow-up study described in the present report are to investigate, for a sample of males who were living in a deprived inner-city area at age 8, the development of offending and antisocial behaviour from age 10 to age 50 and the adult life adjustment of persisters, desisters and late onset offenders at age 48. The specific questions addressed are as follows:

1. What are the key features of official criminal careers?

The latest conviction data can be amalgamated with earlier data to establish the ages of the first and last offences, the duration of criminal careers, the numbers and types of offences committed at different ages, continuity in offending over time, and the relation between ages of onset and the frequency and duration of offending.

2. What is the relationship between self-reported and official offending at different ages?

The social interview at age 48 provides new self-report data that can be linked up with earlier official and self-report data to extend knowledge about the time course of criminal careers from age 10 to age 48 (uniquely including contemporaneous self-report data at several different ages on the same people). It is also possible to compare self-reported and official offending to establish the number of self-reported offences per conviction.

3. What is the adult life adjustment of desisters?

The social interview information can establish to what extent men who appear to have desisted from offending according to official criminal records (committing no offences after age 20) are still committing offences according to their own self-reports and engaging in other types of antisocial behaviour at age 48. In addition, it is possible to investigate to what extent desisters could be predicted from childhood risk factors at age 8–10.

4. What is the adult life adjustment of late-comers to crime?

The social interview can establish to what extent the men who did not start offending until age 21 or later (according to official criminal records) are relatively deviant at age 48, in committing offences and in their adult life adjustment, compared with unconvicted men. In addition, it is possible to investigate to what extent the late-comers could be predicted from childhood risk factors at age 8–10.

5. What is the adult life adjustment of persistent offenders?

It might be expected that persistent offenders – those convicted both before and after the 21st birthday – would be the most deviant at age 48, according to self-reports of offending and measures of life success. However, a key issue is to what extent persistent offenders – as well as desisters and late-comers – become more conventional and law-abiding between ages 32 and 48, and to what extent measures of life success are improving between these ages. In addition, it is possible to investigate to what extent persistent offenders could be predicted from childhood risk factors at age 8–10.

The social interview

The face-to-face social interview given at age 48 was closely modelled on the previous social interview given at age 32. It included the following sections:

- a. The date, time and place of the interview, the interviewer, the length of the interview, the age of the man;
- b. The type of accommodation, number of rooms, whether it was owned or rented, problems with the accommodation or area, reasons for moving out from or back to London, other persons living in the household, details about the wife or female partner, dates of marriages, places where the man has lived in the last five years;
- c. The man's employment, average weekly take-home earnings, money from other sources, job of female partner, periods of unemployment in the last five years, illnesses, injuries and hospitalization in the last five years, money owed;
- d. Details about the man's (and his female partner's) children, including dates of birth, and questions referring to children at ages 3–15: age children are let out in the street on their own, extent to which the man knows where they are when they go out, last resort punishment if they are naughty, agreement between the man and his female partner on controlling children, child problems (lying, stealing, running away, truancy, disobedience, temper tantrums, bullying, destructiveness, restlessness, bed-wetting, sleep disturbance, fears, nervous habits), and contact of children with social agencies;
- e. Whether the man's parents and siblings are still alive, dates of deaths, relationships with parents and siblings;

- f. Relationship with female partner, rows, violence between man and female partner, sexual relationship, intercourse with other women in the past year;
- g. Frequency of going out in the evening, companions and places, money spent on smoking and drinking, amount drunk, four questions designed to detect alcoholism (the CAGE questionnaire), driving after drinking at least five pints of beer (or equivalent) in the last five years, drug taking in the last five years, why drug taking has stopped, fights in the last five years;
- h. The same attitude questionnaire completed by the man at ages 18 and 32;
- i. Court appearances in the last five years, characteristics of offences, opinion of police behaviour and court decision, effect of sentence;
- j. The same self-reported offending questions asked from age 18 onwards, plus questions about companions, age each act was first and last committed, estimated chances of being caught;
- k. The General Health Questionnaire (GHQ), previously given at age 32, designed to detect non-psychotic psychiatric illness (anxiety/depression);
- l. The Eysenck Personality Inventory (previously given at age 16) and the Big Five Personality Inventory.

This survey was approved by the Ethics Committee of the Institute of Psychiatry, London University. Only a small fraction of the questions are analysed for this report, namely those measuring self-reported offending and different aspects of life success (accommodation, cohabitation, employment, fighting, alcohol use, drug use, and the GHQ).

Tracing and interviewing the men

Great efforts were made to locate and interview as many of the men in the sample as possible at age 48 because of our belief (based in part on previous results obtained in this survey) that the most interesting (i.e. most antisocial) persons in any criminological project tend to be difficult to locate and uncooperative. Surveys in which only about 75 per cent of the target sample (or even less) are interviewed are likely to produce results which seriously underestimate the true prevalence and frequency of antisocial and criminal behaviour. An

increase in the percentage interviewed from 75 per cent to nearly 95 per cent leads to a disproportionate increase in the validity of the results.

For example, West and Farrington (1973, p.77) reported that parents who were rated by interviewers as uncooperative (5%) or reluctant (5%) to participate in the survey when their boys were aged eight were significantly likely to have boys who were later convicted as juveniles. About 40 per cent of these boys became juvenile delinquents, in comparison with only 18 per cent of those who had cooperative parents at age eight. Similarly, when the boys were aged 18, West and Farrington (1977, p.165) showed that 36 per cent of the 64 boys who were the most difficult to interview were convicted, in comparison with only 22 per cent of the 318 boys who were interviewed more easily, a statistically significant difference. Surprisingly, only 24 per cent of the 17 boys who refused to be interviewed at age 18 were convicted. (Seven other boys were interviewed in penal institutions and five were not interviewed because they were abroad.)

At age 32, as mentioned, 378 of the 403 men who were still alive at that time were interviewed (94%). Farrington *et al.* (1990) described the methods of tracing and securing cooperation that were used. The most elusive and uncooperative men at age 32 tended to have had uncooperative parents at age 8 and to have been uncooperative themselves at age 18. Hence, there was continuity in being uncooperative within and between generations. The more uncooperative men at age 32 tended to be adult offenders, living with no wife or female partner, involved in fights, tenants rather than home owners, and heavy smokers. At age 32, 19 per cent of 306 cooperative men were convicted after age 20, compared with 33 per cent of 70 uncooperative men who were interviewed and 26 per cent of 27 men who refused. (Two cooperative wives of refusers filled in questionnaires on behalf of their husbands, in at least one case with the husband's collaboration and assistance.)

Up to age 48, 17 of the men had died, of whom 13 had been convicted. Death certificates were obtained in all cases. Of the convicted men, three died in accidents (in at least one case while intoxicated), two from cancer, one from a drug overdose, one from a stroke, one from bronchopneumonia, one from a cerebral haemorrhage, one from motor neurone disease, and one from suicide. The remaining two were listed as "cause not known – open verdict". Of the four unconvicted men, one died from a cerebral haemorrhage, one from a heart attack, one in an accident while working, and one from suicide.

Of the 394 men who were alive, five could not be traced and 24 refused to be interviewed. Information was collected from the remaining 365 (93%), of whom 343 were interviewed in person, 13 interviewed by telephone, six completed a postal interview and there were three

collateral interviews: one sister filled in the interview for a man who was seriously ill, one brother filled it in for a man who refused, and one wife (with the man's agreement) filled it in for a man who refused. For ease of exposition, the remainder of this chapter refers to the 365 interviewed men.

By age 48, the men had scattered far and wide. Only 11 per cent were still living in the Study area in South London, 24 per cent were living in other London postal districts, 35 per cent were in the counties south of London (Surrey, Sussex or Kent), 25 per cent were in the rest of the United Kingdom, and five per cent were abroad.

For the interviews at age 48 (as in earlier years) a research office was established in London. Each Study man was randomly allocated to one of the interviewers, so that it would be possible to investigate interviewer effects. The interviewers were responsible for tracing and obtaining the cooperation of the men as well as for carrying out the interviews. There are advantages in having the same person tracing, securing cooperation, and interviewing, because information obtained during the tracing process could prove helpful in securing cooperation or in interviewing.

The interviewers were given freedom to select what they considered to be the best methods of tracing and securing cooperation, although guidelines were developed in collaboration with other members of the research team. All the interviewers had previous interviewing experience. They were trained and had detailed discussions with past and present researchers on this project, which helped them to develop relevant skills and – more importantly – to avoid mistakes.

As in earlier years of this Study, the interviewers were not part-time employees paid for each completed interview, which might have encouraged them to concentrate on the easier cases. They were full-time employees and fully involved as collaborators in the research enterprise. They participated in all aspects of the project, including designing and piloting the interview schedule, coding and checking the computerized data, and analysing and writing up material, including a newsletter for the men. They had a great stake in the success of the Study, were convinced of its importance, and were highly motivated, committed, and enthusiastic. Hence, they worked exceptionally hard, endured unsocial hours and difficult working conditions, and showed great persistence in the face of the inevitable set-backs.

The Study men became eligible for interview in order of birth. Since they were originally drawn from two school years, most of the original 411 were born between September 1952 and August 1953 (229) or between September 1953 and August 1954 (159). The

second age cohort was smaller than the first because of the omission of two schools. There were also 23 boys in the Study, originally regarded as a pilot group, who were born between September 1951 and August 1952, and drawn from one class in one school. (The original design of the study specified about 400 males because it was envisaged that about one-quarter would be convicted as juveniles, and hence comparisons would be made between 100 convicted and 300 unconvicted males.)

When each man became eligible for interview, a pre-interview sheet was completed for him. This listed the man's full name, date of birth, last known address, the date and place of his last interview, whether the man or his parents were thought to be hostile or uncooperative, whether he was illiterate, whether he was convicted, the name of his wife or female partner (if applicable), the type of his last known employment, and the schools he had attended. It also included impressionistic details from earlier interviews that might be helpful (e.g. the man's attitude to being paid for his interview). This information was used by the interviewer in tracing and securing cooperation. The men were normally paid a small fee (£20) for completing the interview.

The interviews began in December 1999 and continued until March 2004. However, most men were interviewed in 2000 (113), 2001 (140) or 2002 (84). The average age of the men at interview was 48.0, with the youngest being 45.9 and the oldest 51.5. However, most men were aged 47 (189), 48 (87) or 49 (48) at interview. Given the average year of birth of 1953, it is reasonable to regard this interview as carried out (on average) at age 48 in 2001.

Summary

At age 48, the males were given a face-to-face social interview modelled on earlier interviews (especially the one given at age 32). Great efforts were made to locate and interview as many men in the sample as possible, because the most antisocial people tend to be difficult to locate and uncooperative. In the Cambridge Study, the vast majority of males still alive were interviewed at age 48 (93%), as at age 32 (94%) and age 18 (95%).

Criminal record searches

Up to 1994, searches were carried out in the central Criminal Record Office (National Identification Service or NIS) at Scotland Yard in London to try to locate findings of guilt of the males and their relatives. The minimum age of criminal responsibility in England is ten. The Criminal Record Office contained records of all relatively serious offences committed in Great Britain or Ireland, and also acted as a repository for records of minor juvenile offences committed in London. In the case of 18 males who had emigrated outside Great Britain and Ireland by age 32, applications were made to search their criminal records in the eight countries where they had settled, and searches were actually carried out in five countries. Only seven males were counted as not at risk of conviction, because they emigrated permanently before age 21, were not convicted, and were not searched abroad.

The previous search of conviction records took place in the summer of 1994, when most of the males were aged 40. Convictions were counted for offences committed up to the end of 1993. Between ages 10 and 16 inclusive (the years of juvenile delinquency in England at that time), 85 males (21%) were convicted. Altogether, up to age 40, 164 males were convicted (Farrington, Barnes and Lambert, 1996; Farrington, Lambert and West, 1998). In this report, the recorded age of offending is the age at which an offence was committed, not the age on conviction. There can be delays of several months or even more than a year between offences and convictions, making conviction ages different from offending ages. In investigating criminal careers, it is vital to study when offences were committed.

Offences are defined as acts leading to convictions, and only offences committed on different days were counted. Where two or more offences were committed on the same day, only the most serious one was counted. This rule was adopted so that each separate incident could only yield one offence; if all offences had been counted, the number of offences would have been greater than the number of criminal incidents, and hence the number of criminal incidents would have been overestimated. The most serious offence was defined as the one which received the most severe sentence or – where sentences were equal – the one with the longest maximum sentence. Most court appearances arose from only one offending day; the 760 recorded offences up to age 40 corresponded to 686 separate occasions of conviction. Offences “taken into consideration” were not counted.

Convictions were only counted if they were for standard list offences, thereby excluding minor crimes such as traffic infractions and simple drunkenness. The most common offences included were thefts, burglaries and unauthorized takings of vehicles, although there were also quite a few offences of violence, vandalism, fraud and drug abuse. In order not to rely on official records for information about offending, self-reports of offending were obtained from the males at every age from 14 onwards.

In 1994 and earlier, microfiche records were consulted in Scotland Yard. However, from 1995, the microfiche collection was discontinued and all convictions (and cautions) were recorded on the Police National Computer (PNC). There was only limited copying of old records to the PNC, generally when a person received a new conviction. The latest searches of criminal records of Study males took place in July 2002 and December 2004, at which time the youngest man was aged 50. Many records of old convictions were not found in the PNC, and several convictions before 2002 were not found until the 2004 search, which covered NIS as well as PNC. The earliest date listed in the PNC was counted as the date on which an offence was committed.

It was decided to count officially recorded cautions as well as convictions in the PNC, since cautions were routinely recorded on a national basis from 1995. In this report, therefore, convictions after age 40 include cautions; out of 78 offences recorded from age 40 onwards, 18 received cautions (for shoplifting, drug offences, assault, violent disorder, criminal damage and obtaining by deception). The definition of what is a "standard list" offence changed over time. In particular, drunk driving offences were added to the standard list from 1996, and 12 convictions for this offence were recorded. Because of changes in their categorization over time, all motoring offences were excluded from the analyses. If they had been included, the number of late onset offenders, and the average length of criminal careers, would have been increased.

There were major problems in deciding whether a man found in the PNC search was really the Study man, particularly in the case of people with common names and no middle names, and when there were slight differences in names or dates of birth between the PNC and the Study records. Fortunately, it was possible to establish whether each PNC man was the Study man unambiguously in all cases, using the Study interview information and knowledge about the man's address (compared with his places of arrest and conviction, which were listed on the PNC file). In many cases, the man and/or his female partner provided information about convictions in interviews. It would have been impossible to establish with certainty who was or was not the Study man in the computerized PNC data in the absence of the Study interview data. This was not a problem with the previous searches of paper and microfiche files, because they provided

much fuller information than the computerized records that were received from the PNC. (The researchers searched paper files between 1964 and 1979 and microfiche files between 1979 and 1994; in all these searches they were able to go to Scotland Yard and see the files.)

Age and crime

This chapter reviews key issues in criminal career research: the current (e.g. annual) prevalence and cumulative prevalence of offending, ages of the first and last offences, duration of criminal careers, numbers and types of offences committed at different ages, continuity in offending over time, and the relation between ages of onset and the frequency and duration of offending. For a review of previous research on these topics, see Farrington (1997c).

Table 3.1 shows the number of Study males first convicted at each age, the number of different males convicted at each age, and the number of convictions at each age; 167 males were convicted out of 404 at risk of having a conviction recorded (41%), that is excluding seven men who emigrated early and were not searched. The number of males at risk of conviction at each age is also shown, taking account of dates of emigration and death. The number of offenders and offences at age 50 is incomplete, and includes three offences committed at age 51.

The cumulative prevalence of convictions in this survey, 41 per cent up to age 50, is somewhat higher than for males born in England and Wales in 1953: 33 per cent up to age 45 were convicted for a standard list offence (see Prime *et al.*, 2001). However, the two figures are not totally comparable. For example, all motoring offences, which are included in the national figure, have been excluded here. Also, the national figure includes convictions of visitors and immigrants, who would not be part of the 1953 birth cohort. Nevertheless, it is clear that the cumulative prevalence of convictions of males in this sample is higher than the national figure.

The number of offences (69) and different offenders (46) peaked at age 17, closely followed by age 18 (67 and 44, respectively). Expressed as a rate, there were 11 offenders and 17 offences per 100 males at age 17. There were an average of 59 offences per year at age 17–20, falling to 23 per year at age 21–25, 16 at age 26–30, 11 at age 31–35, seven at age 36–40, ten at age 41–45, and four at age 46–50. The average age on offending was 23.5 years, with a standard deviation of 9.7. However, because of the skewness of the age-crime curve, it is better summarized using percentiles. The 25th percentile was at age 16, the median age was at 20, and the 75th percentile was at age 29.

Table 3.1 *Changes in official offending with age*

Age	No. males at risk	No. of first offenders	No. of offenders	No. of offences
10	409	6	6	7
11	409	6	8	10
12	409	8	12	15
13	409	15	22	28
14	409	19	34	49
15	408	17	33	46
16	408	15	33	59
17	407	17	46	69
18	405	8	43	64
19	404	9	40	52
20	403	9	31	50
21	403	2	20	23
22	400	3	26	40
23	399	2	11	12
24	398	2	15	20
25	398	3	15	20
26	398	4	14	16
27	397	0	12	18
28	397	2	13	15
29	397	0	14	19
30	397	1	11	13
31	397	4	10	10
32	396	2	8	10
33	396	3	9	9
34	396	2	11	13
35	396	2	12	14
36	396	0	6	7
37	396	1	9	12
38	394	0	7	7
39	394	1	3	3
40	394	1	8	8
41	393	0	5	8
42	392	0	7	7
43	392	0	11	13
44	392	1	9	9
45	391	1	8	11
46	390	0	8	11
47	389	1	3	3
48	387	0	0	0
49	387	0	1	1
50	386	0	5	7
Total		167		808

Note: No. of males at risk: excluding dead and emigrated/not searched. Figures at age 50 are incomplete and include 3 offences committed at age 51.

The number of first offenders peaked between ages 13 and 17 (when 83 of the 167 offenders committed their first offences). There were only three first offenders at age 36–40 and only three new offenders after age 40 (although two other men had first convictions for drunk driving). The average age of onset was 19.1 years, with a standard deviation of 7.4. However, percentiles are more realistic: the 25th percentile was at age 14, the median age of onset was at age 16, and the 75th percentile was at age 20.

Types of offences

Table 3.2 *Types of offences committed at different ages*

Type	Age						Total	Total
	10-15	16-20	21-25	26-30	31-40	41-50	No. of offences	No. of offenders
Burglary	38	54	18	10	8	2	130	62
Theft of motor vehicle	19	62	16	9	2	2	110	62
Theft from motor vehicle	15	14	5	3	1	0	38	29
Shoplifting	19	8	7	4	18	10	66	38
Theft from machine	8	5	1	3	0	0	17	12
Theft from work	0	14	2	2	4	0	22	20
Other theft	23	30	13	5	3	4	78	54
Fraud	2	16	13	9	10	10	60	36
Receiving	6	11	6	7	5	0	35	28
Suspected person	10	14	3	3	0	0	30	22
Robbery	2	7	4	4	1	0	18	9
Assault	4	14	11	9	14	13	65	42
Threats	1	12	6	5	7	4	35	24
Offensive weapon	2	10	2	3	2	7	26	22
Sex	4	2	0	0	5	2	13	10
Drug	0	10	5	2	3	8	28	15
Vandalism	2	11	3	3	10	8	37	27
Total	155	294	115	81	93	70	808	167
Motoring offence (driving while disqualified, drunk driving), which was not counted	0	7	5	7	10	13	42	25

Table 3.2 shows the numbers and types of offences committed, which were divided into 18 categories:

1. Burglary, breaking and entering, attempted burglary.
2. Theft of vehicle, taking and driving away vehicle.
3. Theft from vehicle, theft of parts of vehicle.
4. Shoplifting.
5. Theft from machines, including parking meters and telephone boxes.
6. Theft from work, theft as employee.
7. Other theft, including conspiracy to steal and abstracting electricity.
8. Fraud, forgery, deception, fare evasion, false pretences, making off without payment.
9. Receiving stolen property, handling, unlawful possession.
10. Suspected person, equipped to steal, tampering with vehicle, possession of house-breaking implements.
11. Robbery, conspiracy to rob, assault with intent to rob.
12. Assault causing actual or grievous bodily harm, assault police.
13. Insulting or threatening behaviour, breach of peace, obstruct police, violent disorder, affray, interfering with witness.
14. Possession of offensive weapon, possess firearms, possess ammunition, shortening barrel of shotgun.
15. Sexual offences: indecent assault, unlawful sexual intercourse, indecent exposure, indecent telephone message, rape, indecent photographs of children, importuning males.
16. Drug offences.
17. Vandalism, criminal damage, arson.
18. Driving while disqualified, drunk driving. As mentioned, these were not counted, because of inconsistent recording over time.

The most common offences were burglary (62 offenders, 130 offences) and theft of vehicles (62 offenders, 110 offences). There were only ten sex offenders and 13 sex offences. Burglary and theft of vehicles were particularly common at age 16–20. At age 41–50, the most common offences were motoring (13), assault (13), fraud (10), shoplifting (10), drugs (8), and vandalism (8).

Continuity in convictions

Table 3.3 shows the extent to which there was continuity in offending over time, according to convictions. There were 71 males convicted at age 10–15 (17% of 408 at risk),

compared with 105 at age 16–20 (26%), 60 at age 21–25 (15%), 41 at age 26–30 (10%), 49 at age 31–40 (12%) and 33 at age 41–50 (8%). The table shows, for example, that 67 per cent of males who were convicted between ages 10 and 15 were also convicted between ages 16 and 20, compared with 17 per cent of those who were not convicted between ages 10 and 15 (odds ratio or OR = 9.7; 95 per cent confidence interval or CI 5.5 - 17.3). Continuity cannot be measured by simple percentages because these are greatly affected by prevalence. The OR is the best measure of continuity in Table 3.3. Providing risks are relatively low, the OR approximately indicates the increase in relative risk (see Note on logistic regression with an explanation of odds ratios, at p.63). Hence an OR of 2 indicates that the risk of the outcome (conviction) was roughly doubled.

Table 3.3 *Continuity in convictions*

Age 1	Age 2	Percentage of those convicted in age 1 who were also convicted in age 2	Percentage of those not convicted in age 1 who were convicted in age 2	Odds ratio (all $p < 0.05$)
10-15	16-20	67.1 (70)	17.4 (334)	9.7
10-15	21-25	47.8 (67)	8.5 (331)	9.9
10-15	26-30	31.3 (67)	6.1 (330)	7.1
10-15	31-40	28.8 (66)	9.2 (327)	4.0
10-15	41-50	21.9 (64)	5.8 (325)	4.5
16-20	21-25	39.6 (101)	6.7 (297)	9.1
16-20	26-30	29.0 (100)	4.0 (297)	9.7
16-20	31-40	26.5 (98)	7.8 (295)	4.3
16-20	41-50	22.9 (96)	3.8 (293)	7.6
21-25	26-30	33.3 (60)	6.2 (337)	7.5
21-25	31-40	33.9 (59)	8.7 (334)	5.4
21-25	41-50	23.7 (59)	5.8 (330)	5.1
26-30	31-40	52.5 (40)	7.9 (353)	12.8
26-30	41-50	35.0 (40)	5.4 (349)	9.4
31-40	41-50	43.8 (48)	3.5 (341)	21.3

Note: Numbers in parentheses; different numbers of males were at risk in each comparison, because of death and emigration.

Table 3.3 shows that the highest degree of continuity was between ages 31–40 and 41–50 (OR = 21.3), ages 26–30 and 31–40 (OR = 12.8), ages 10–15 and 21–25 (OR = 9.9), ages 10–15 and 16–20 (OR = 9.7), and ages 16–20 and 26–30 (OR = 9.7). Conversely,

the lowest degree of continuity was between the more separated ages 10–15 and 31–40 (OR = 4.0), ages 16–20 and 31–40 (OR = 4.3) and ages 10–15 and 41–50 (OR = 4.5). However, continuity was high in all cases.

Criminal careers

Table 3.4 *Total number of offences committed*

No. of offences	No. of men	Cum. No. of men	Cum. % of men	Cum. % of offenders	Cum. No. of offences	Cum. % of offences
1	49	167	40.8	100.0	808	100.0
2	30	118	28.9	70.7	759	93.9
3	19	88	21.5	52.7	699	86.5
4	13	69	16.9	41.3	642	79.5
5	12	56	13.7	33.5	590	73.0
6	7	44	10.8	26.3	530	65.6
7	3	37	9.0	22.2	488	60.4
8	4	34	8.3	20.4	467	57.8
9	2	30	7.3	18.0	435	53.8
10	4	28	6.8	16.8	417	51.6
11	5	24	5.9	14.4	377	46.7
12	4	19	4.6	11.4	322	39.9
13	1	15	3.7	9.0	274	33.9
14	1	14	3.4	8.4	261	32.3
15	1	13	3.2	7.8	247	30.6
16	2	12	2.9	7.2	232	28.7
17	2	10	2.4	6.0	206	24.8
18	3	8	2.0	4.8	166	20.5
19	1	5	1.2	3.0	112	13.9
20	1	4	1.0	2.4	93	11.5
21	1	3	0.7	1.8	73	9.0
23	1	2	0.5	1.2	52	6.4
29	1	1	0.2	0.6	29	3.6
Total	167	167	409	167	808	808

Note: Cum. = Cumulative

Table 3.4 shows the number of men committing each number of offences. For example, 49 men committed only one offence, and at the other extreme one man committed 29 offences leading to convictions. It also shows cumulative numbers of offenders and offences, adding

up from the men committing the most offences. A small proportion of men committed a large proportion of all offences. Twenty-eight men (7% of men and 17% of offenders) committed half of the 808 offences (417, or 52%); see the row opposite ten offences. Because they committed half of all offences, these 28 men are conventionally termed “chronic offenders” (see Wolfgang, Figlio and Sellin, 1972). Each of them had at least ten convictions.

Table 3.5 *Age of onset versus criminal career measures*

Age first offence	No. of offenders	% recidivist	Total No. of offences	Av. No. of offences	Av. Age last offence	Av. career duration	Av. duration (Exc 0)
10-13	35	91.4	316	9.0	25.4	12.8	14.0
14-16	51	84.3	304	6.0	28.5	13.0	15.5
17-20	43	65.1	113	2.6	25.1	6.4	9.9
21-30	19	36.8	38	2.0	28.8	3.8	10.2
31-50	19	42.1	37	1.9	38.8	2.8	6.6
Total	167	70.7	808	4.8	28.2	9.1	12.8

Note: Av. duration in years.
Exc 0 = Excluding one-time offenders

Table 3.5 shows that the men who began their conviction careers at the earliest ages tended to commit the most offences and to have the longest criminal careers (up to age 50). This conclusion was not greatly affected by the truncation of the data at age 50, because the average age of the last offence of those who were first convicted at the oldest ages (31 or greater) was long before age 50, at age 38.8 years. Nearly all (91%) of those with a first conviction at age 10–13 were recidivists, compared with 84 per cent of those who started at age 14–16. The men who started at age 10–13 committed nine offences on average, compared with six offences committed by those who started at age 14–16. These two groups of men with a juvenile onset committed three-quarters of all crimes (620 out of 808, or 77%). Dead men are included in this table. If they had not died, of course, their criminal careers might have been longer.

The men who started at age 10–13 committed their last offence at an average age of 25.4 and had an average criminal career duration (defined as the time between the first and last offences) of 12.8 years. In comparison, those who started at age 14–16 committed their last offence at age 28.5 on average and had a similar career duration of 13 years. Excluding the one-time offenders (who had a career duration of 0), the average career duration was 14 years for those who started at age 10–13 and 15.5 years for those who started at age 14–16.

Over all offenders, the average criminal career lasted from age 19.1 to age 28.2 (a mean duration of 9.1 years) and contained 4.8 offences leading to convictions. For those with two or more convictions, the average career duration was 12.8 years. The comparable national figures are 6.2 years for all male offenders up to age 45 and 12.4 years for those with two or more convictions (Prime *et al.*, 2001). It is interesting to compare these figures with our calculations up to age 40 in 1993 (Farrington, Lambert and West, 1998). Up to then, the average criminal career lasted from age 18.6 to age 25.7 (a mean duration of 7.1 years) and contained 4.6 offences. Excluding one-time offenders, the average career duration was then 10.4 years. These figures included motoring offences. Even after excluding these offences, extending the follow-up period from age 40 to age 50 increased the average career duration by two years, from 7.1 years to 9.1 years. Further follow-ups are likely to lead to further increases in the average career duration.

Table 3.6 *Frequency of offending versus criminal careers and incarceration*

No. of offences	No. of men	Av. age first offence	Av. age last offence	Av. career duration	No. men incarcerated	% incarcerated	Av. time served (Total)
1	49	23.0	23.0	0.0	2	4.1	0.9
2	30	18.7	24.5	5.8	2	6.7	2.3
3-4	32	19.2	29.2	10.1	4	12.5	0.3
5-9	28	17.9	33.0	15.0	12	42.9	0.6
10-14	15	14.3	34.7	20.4	11	73.3	1.0
15+	13	13.2	35.7	22.5	13	100.0	2.6
Total	167	19.1	28.2	9.1	44	26.3	1.3

Note: Average ages, durations and time served in years.
Numbers may not exactly add because of rounding.
Average time served was based only on those who were incarcerated.

Table 3.6 shows average career durations according to numbers of convictions up to age 50. The one-time offenders, of course, had an average career duration of 0. In contrast, the men who committed 15 or more offences had an average criminal career lasting 22.5 years, from age 13.2 to age 35.7 on average. Similarly, the men who committed between 10 and 14 offences had an average criminal career lasting 20.4 years, from age 14.3 to age 34.7 on average. These two groups together constitute the “chronic offenders”. If followed up to age 70, their average criminal career durations might exceed 30 years. Dead men are included in this table.

Only 44 of the 167 offenders (26%) were ever sent to prison, borstal, a young offenders’ institution or a detention centre. (Prison sentences of one day were not counted.) Not

surprisingly, the percentage incarcerated increased with the number of offences committed, from four per cent of those who committed only one offence to 73 per cent of those who committed 10–14 offences and all of those who committed 15 or more offences. In this sample, the cumulative prevalence of custodial sentences up to age 50 was 11 per cent (44/404). The comparable national figure for males up to age 45 was eight per cent (Prime *et al.*, 2001).

The average time served was estimated as two-thirds of the sentence length up to 1992 and half subsequently (because of the impact of the Criminal Justice Act 1991). Over all those who were incarcerated, the average time served was 1.3 years, and only two offenders served a total time greater than 3.5 years. One of these men had 23 convictions, including 10 for drugs and four for burglary. He received four custodial sentences, of which the longest was five years for robbery and possessing a firearm (committed at age 39). In total, he served 5.5 years in custody. The other man had 17 convictions, including eight for robbery. He received five custodial sentences, of which the longest were ten years for two robberies and causing actual bodily harm (at age 28–29) and nine years for two robberies (at age 35). In total, he served 15.8 years in custody. The most persistent offenders (those who had committed 15 or more offences) served a total of 2.6 years in custody on average.

Categories of official offenders

Table 3.7 shows the main categories of official offenders and the percentage of those still alive in each category who were interviewed at age 48. There were 237 unconvicted men, excluding seven who were abroad (six of whom were interviewed) and considered to be not covered by searches of the conviction records. Of these 237, 233 were alive at age 48, and 93 per cent of those who were alive were interviewed. There were 167 convicted men, of whom 154 were alive, and 93 per cent of these were interviewed.

Table 3.7 shows that 129 men (32%) were convicted by age 20, and 95 per cent of those alive were interviewed; 108 men (27%) were convicted at age 21 or older, and 93 per cent were interviewed. Later analyses will contrast the “desisters” (53 convicted before age 21 and not subsequently) with the “late-comers” (38 men convicted at age 21 or older but not before) and the “persisters” (70 men convicted both before and after age 21). Six convicted men who died up to the age 26 were regarded as “not known” in this classification. Thirty-two men were “current” offenders who were convicted between ages 42 and 47. These ages were chosen because, as explained in the next chapter, the self-reports in the latest interview generally covered ages 42 to 47. No man was convicted at age 48. The current offenders had committed 8.7 offences on average and had an average criminal career duration of 24 years.

Table 3.7 *Categories of official offenders*

Category	No. of men	No. alive	No. interviewed	% interviewed
Not convicted	237	233	216	93
Convicted	167	154	143	93
Not convicted up to 20	275	269	247	92
Convicted up to 20	129	118	112	95
Not convicted at 21+	289	284	263	93
Convicted at 21+	108	103	96	93
Convicted only up to 20	53	51	47	92
Convicted only at 21+	38	36	31	86
Convicted before and after 21	70	67	65	97
Not convicted 42-47	135	125	117	94
Convicted 42-47	32	29	26	90
One-time offender	49	45	42	93
Recidivist	118	109	101	93
Non-chronic offender	139	128	119	93
Chronic offender	28	26	24	92
Non-incarcerated offender	123	114	106	93
Incarcerated offender	44	40	37	93
Career duration <15 years	77	70	64	91
Career duration 15 years+	41	39	37	95

Note: Percentage interviewed out of those alive at age 48.

Of the 167 offenders, 49 were one-time offenders and 118 were recidivists with two or more convictions. As mentioned earlier, 28 men were chronic offenders, while 44 men had been incarcerated and 41 men had a career duration of 15 years or longer. These categories overlapped, of course; 24 out of 28 chronics were incarcerated, 18 chronics had a career duration of 15 years or longer, and 22 of the 44 incarcerated men were among the 41 men with a career duration of 15 years or longer. At least 90 per cent of all categories of men were interviewed, except for late-comers to crime (86%).

Of the four chronic offenders who were not incarcerated, three committed large numbers of less serious offences, respectively benefit fraud, obstructing police (in street gaming) and shoplifting. However, the fourth man was convicted on nine separate occasions for a total of 11 offences, including five burglaries and two assaults. It may appear surprising that he was never sent to custody, but seven of his offences, including four burglaries, were committed up to age 15. For a burglary at age 15, he was originally sent to an approved school, but this sentence was varied on appeal to probation. His two assaults were committed at age 43, 23 years after his previous offence.

Summary

According to criminal records, 41 per cent of the males were convicted for standard list offences (excluding motoring offences) up to age 50. The most common offences were burglary and theft of vehicles. The peak age for offences leading to conviction was at 17 (about 17 offences per year per 100 males). However, offences were still being committed after age 40 (about two offences per year per 100 males). The average age of onset was 19, the average age of “desistance” (the last offence up to age 50) was 28, the average criminal career duration was nine years, and the average career contained five offences leading to conviction.

A small fraction of the males (7%) – the “chronic” offenders – accounted for over half (52%) of all officially recorded offences. Each of these men had at least ten convictions. Their average criminal careers began at age 14, ended (so far) at age 35, and lasted 21 years on average.

There was significant continuity in offending from one age to the next. For example, 44 per cent of those who were convicted at age 31–40 were also convicted at age 41–50, compared with only four per cent of those who were not convicted at age 31–40.

An early onset predicted many convictions and a long criminal career. The males who were first convicted at age 10–13 had nine offences in a 13-year criminal career on average. Those who were first convicted at age 14–16 had six offences in a 13-year criminal career on average. These two groups of men accounted for three-quarters of all convictions.

Only a quarter of all convicted offenders were ever sent to custody, and their average time served was 1.3 years. However, 24 of the 28 chronic offenders were sent to custody, with an average time served of 1.6 years. The vast majority of incarcerated offenders (82%) had five convictions or more.

4.

Self-reported versus official offending

Self-reported offending

This chapter reviews information about offending and criminal careers based on self-reports, and compares self-reported offending with convictions. For a review of previous research on self-reported offending, especially in the UK, see Farrington (2001b). The Home Office mounted a new national self-reported offending survey in 2003 (Budd, Sharp and Mayhew, 2005).

During the interviews at ages 14, 18, 32 and 48, the Study males were asked to self-report offences that they had committed that had not necessarily come to the notice of the police. The numbers interviewed at the four ages were 405 (99%), 389 (95%), 378 (94%) and 365 (93%) respectively. The median ages at interview were 14 years 9 months, 18 years 7 months, 32 years 3 months and 47 years 8 months.

The self-report offences were presented on cards, and the males were initially asked to sort the cards according to whether or not they had committed each act during a specified reference period. Where the men had reading difficulties, the cards were read out to them. More detailed questions were then asked about the offences reported, such as how many times the person had done it, the age he had first done it, and the age he had last done it. The reference periods were: ever (age 14), the last three years (age 18), and the last five years (ages 32 and 47). Hence, the self-reports at the oldest age are termed self-reports at age 42–47, and are compared with convictions at age 42–47 in this chapter.

Ten types of offences were enquired about on most occasions: burglary, theft of motor vehicles, theft from motor vehicles, shoplifting, theft from machines, theft from work, fraud, assault, drug use and vandalism. The exact wording of the items at the different ages are shown in Farrington (1989d). More questions were asked at age 14 than at later ages. One change from previous analyses is that, for the present analyses, assault at age 14 was based on:

- a. attacking an enemy or someone in a rival gang (without using a weapon) in a public place;
- b. using any kind of weapon in a fight – knife, cosh, razor, broken bottle (etc.);
- c. struggling or fighting to get away from a policeman;
- d. attacking or fighting a policeman who is trying to arrest someone else.

At ages 18, 32 and 48, assault was based on involvement in fights, but excluding fights in the course of work as police officers, prison officers or security guards, and being victimized and not fighting back. Blows struck in self-defence (allegedly) were counted as assaults.

These ten types of self-reported offences could be compared with the corresponding ten types of offences leading to convictions, which accounted for 71 per cent of all conviction offences (573 out of 808): 130 burglaries, 110 thefts of motor vehicles, 38 thefts from motor vehicles, 66 shopliftings, 17 thefts from machines, 22 thefts from work, 60 frauds, 65 assaults, 28 drug offences and 37 offences of vandalism. Conviction offences committed at ages 10–14, 15–18, 27–32 and 42–47 were compared with self-reported offences at the corresponding four ages.

Comparisons of offence types and time periods are in some cases only rough approximations. For example, minor assaults might not be counted as official offences but would be included as self-reported offences. Conversely, unsuccessful attempts to commit crimes would be included as conviction offences but probably would not be self-reported. Also, the self-report ages do not correspond exactly to the conviction ages and the self-reports are limited by problems of remembering. Nevertheless, dwelling on the difficulties should not obscure the strengths of this research, which is unique in comparing self-reported and official measures of offending for four age ranges covering a 37-year time period.

Prevalence of self-reported offenders

Table 4.1 shows the prevalence of self-reported offenders in each age range. Information is not available about theft from work and fraud at ages 10–14 and 15–18 either because the questions were not asked or because they were not comparable with later questions. For example, the fraud questions at age 14 were:

- a. deliberately travelling without a ticket or paying the wrong fare; and
- b. obtaining money by false pretences.

There were no fraud questions at age 18, and the fraud questions at ages 32 and 47 were:

- a. obtaining money from the government, such as unemployment or sickness benefit, by telling lies;
- b. not admitting some earnings on which tax should have been paid; and
- c. stealing someone else's cheque, giro or credit card and obtaining money with it.

The vast majority of reports at ages 32 and 47 concerned tax fraud.

Table 4.1 *Prevalence of self-reported offenders*

Offence type (N)	Percent at age				All ages (402)
	10-14 (405)	15-18 (389)	27-32 (378)	42-47 (365)	
Burglary	12.6	10.8	2.4	0.0	20.4
Theft of vehicle	7.4	15.4	2.9	0.0	20.9
Theft from vehicle	8.9	13.4	2.1	0.5	20.4
Shoplifting	39.8	15.4	5.6	2.2	47.5
Theft from machine	14.6	19.0	1.6	0.3	29.6
Theft from work	*	*	24.1	11.8	28.7
Fraud	*	*	52.6	36.4	64.6
Assault	35.6	62.0	37.1	14.5	73.1
Drug use	0.5	31.4	19.4	17.5	40.0
Vandalism	70.1	21.1	1.1	0.8	74.6
Any offence (8)	77.8	76.3	47.4	27.9	93.3

* No comparable data.

Prevalence of "any offence" excludes fraud and theft from work.

The "all ages" N is 402 because all men with self-report data at two or more ages were counted.

Table 4.1 shows that the prevalence of burglary, shoplifting and vandalism was greatest at age 10–14 and then declined. In contrast, theft of vehicles, theft from vehicles, theft from machines, assault and drug use were most prevalent at age 15–18 (and then declined). Less than one per cent of the men reported burglary, theft of vehicles, theft from vehicles, theft from machines or vandalism at age 42–47.

Excluding theft from work and fraud, about three-quarters of the males reported at least one offence at ages 10–14 (78%) and 15–18 (76%). This reduced to about half at age 27–32 (47%) and about a quarter at age 42–47 (28%). Almost all of the males (93%) reported at least one of these eight offences at some stage. In these four age ranges, about 20 per cent said that they had committed burglary, theft of vehicles and theft from vehicles, 30 per cent had stolen from machines, 40 per cent had taken an illegal drug, nearly 50 per cent had shoplifted, and nearly three-quarters had committed assault and vandalism. About two-thirds had committed fraud at one of the oldest two ages, and nearly 30 per cent had stolen from work at one of these ages.

Continuity in self-reported offending

Table 4.2 shows the extent to which there was continuity in self-reported offending over time. For example, 45 per cent of men who self-reported any one of the eight offences at age 27–32 also self-reported an offence at age 42–47, compared with 13 per cent of men who did not self-report an offence at age 27–32 (OR = 5.3, CI = 3.1 - 8.9). With the exception of this comparison, the degree of continuity in self-reported offending was generally less than in convictions. However, there was significant continuity in self-reported offending in all comparisons.

Table 4.2 *Continuity in self-reported offenders*

Age 1	Age 2	S2/S1	S2/NS1	OR
10-14	15-18	78.8	68.2	1.7
10-14	27-32	51.4	34.6	2.0
10-14	42-47	31.7	14.5	2.7
15-18	27-32	53.3	26.3	3.2
15-18	42-47	31.1	17.3	2.2
27-32	42-47	44.8	13.3	5.3

Note: S2/S1 = Percentage of those who self-reported one of the eight offences in age 1 who also self-reported an offence in age 2

S2/NS1 = Percentage of those who did not self-report an offence in age 1 who self-reported an offence in age 2

OR = Odds Ratio (all $p < 0.05$).

The degree of continuity is likely to depend on prevalence. Where a low fraction of the population commit a crime, the offenders are likely to be relatively deviant and persistent. Where a high fraction of the population commit a crime, however, the offenders are unlikely to be distinct or predictable in their future behaviour. The lowest continuity in Table 4.2 was found for self-reported offending between ages 10–14 (prevalence 78%) and 15–18 (prevalence 76%). With such high prevalences, the offenders may be closer to a random sample than for offenders at 27–32 (prevalence 47%) or 42–47 (prevalence 28%). It was noteworthy that the highest continuity was between these latter two ages.

Similar results were obtained for particular types of offences. Between ages 10–14 and 15–18, the lowest continuity was for the more prevalent offences of vandalism (OR = 1.5), shoplifting (OR = 1.8) and assault (OR = 2.6). The highest continuity was for the less prevalent offences of burglary (OR = 5.5), theft of vehicles (OR = 3.3) and theft from vehicles (OR = 3.9). Therefore, the greater continuity in convictions compared with self-reported offending may be a function of the difference in prevalence rather than the difference in method of measurement.

Table 4.3 *Prevalence of official offenders*

Offence type (N)	Percent at age				All ages (405)
	10-14 (409)	15-18 (405)	27-32 (396)	42-47 (387)	
Burglary	3.4	8.9	2.5	0.3	12.6
Theft of vehicle	2.4	9.9	1.5	0.3	12.6
Theft from vehicle	2.4	3.0	1.0	0.0	5.7
Shoplifting	3.2	2.0	1.5	1.3	7.1
Theft from machine	1.0	1.2	0.5	0.0	2.5
Theft from work	0.5	1.0	0.3	0.0	1.0
Fraud	0.0	1.5	1.5	0.8	3.5
Assault	0.5	2.2	3.3	1.8	6.4
Drug use	0.0	0.5	1.0	1.3	2.0
Vandalism	0.0	2.2	1.3	1.3	4.7
Any offence* (8)	10.5	19.0	9.3	4.7	29.3

* Excluding theft from work and fraud.

Table 4.4 *Ratio of self-reported to official offenders*

	% Self-reported (402)	% Official (405)	Ratio
Burglary	20.4	12.6	1.6
Theft of vehicle	20.9	12.6	1.7
Theft from vehicle	20.4	5.7	3.6
Shoplifting	47.5	7.1	6.7
Theft from machine	29.6	2.5	12.0
Theft from work*	28.7	0.3	-
Fraud*	64.6	2.0	32.0
Assault	73.1	6.4	11.4
Drug use	40.0	2.0	20.3
Vandalism	74.6	4.7	15.9
Age 10-14	77.8	10.5	7.4
Age 15-18	76.3	18.8	4.1
Age 27-32	47.4	9.3	5.1
Age 42-47	27.9	4.7	5.9
Eight offences, all ages	93.3	29.3	3.2

* Based only on two ages, 27-32 and 42-47;

- Numbers too small

Eight offences exclude theft from work and fraud

Prevalence of official offenders

Table 4.3 shows the comparable prevalence of official (convicted) offenders for these ten offences in these four age ranges. Just over a quarter (29%) of the men had been convicted for one of eight offences (excluding theft from work and fraud) in these age ranges, compared with 93 per cent who reported at least one of these offences. The men were most likely to be convicted for burglary or theft of vehicles (13% for both, compared with the 20% and 21% who reported these offences). The men were most likely to be convicted at age 15–18 (19%, compared with 76% who reported offences at this age).

Table 4.4 shows the ratio of self-reported to official offenders for each offence type and each age range. Over all offences and all ages, there were 3.2 self-reported offenders for every official offender. This ratio was lowest for burglary (1.6) and theft of vehicles (1.7). It was highest for fraud (32.0), drug use (20.3) and vandalism (15.9). The ratio of self-reported to official offenders was lower at age 15–18 (4.1) than in any other age range.

Overlap between self-reported and convicted offenders

Table 4.5 *Overlap between self-reported and convicted offenders*

Offence type	Age				
	10-14 (405)	15-18 (389)	27-32 (374)	42-47 (359)	All ages (399)
Burglary	54.2*	40.7*	57.6*	–	29.2*
Theft of vehicle	37.7*	27.9*	26.7*	–	20.9*
Theft from vehicle	52.4*	5.0*	–	–	10.7*
Shoplifting	1.8	11.7*	41.3*	24.9*	3.4*
Theft from machine	2.0	17.9*	–	–	10.0*
Assault	–	5.7*	21.8*	9.1*	9.8*
Drug use	–	–	17.3*	20.0*	10.8*
Vandalism	–	14.2*	30.5*	88.5*	1.8
Total	2.9*	14.1*	21.8*	7.0*	10.7*

Note: Odds Ratios are shown

* $p < 0.05$

– Numbers too small

Table 4.5 summarizes the overlap between self-reported and convicted offenders, using the odds ratio as a measure of strength of relationship. Odds ratios are only shown where there were at least four convicted offenders in a category. For example, 49 per cent (40) of the

82 self-reported burglars (taking account of the four age ranges) were also convicted burglars, whereas only three per cent (10) of the 317 men who denied burglary were convicted for burglary (OR = 29.2, CI = 13.6 - 62.8, $p < .05$). The relationships between self-reported and convicted offenders were strongest for burglary (OR = 29.2) and theft of vehicles (OR = 20.9). The relationship was weakest for vandalism, possibly because of its high prevalence in self-reports (75%) and low prevalence in convictions (5%); five per cent (16) of 300 self-reported vandals were convicted, compared with three per cent (3) of 99 men who denied vandalism (OR = 1.8). Self-reported and official vandalism were strongly related in each of the three age ranges.

The weakest relationship between self-reported and convicted offenders was in the youngest age range (10–14), again possibly because self-reported offenders were common (78%) and convictions were not (11%); 12 per cent (38) of 315 self-reported offenders were convicted, compared with four per cent (4) of 90 self-reported non-offenders at age 10–14 (OR = 2.9). In this age range, self-reported and convicted offenders were strongly related for burglary and theft of and from vehicles, but not for shoplifting or theft from machines.

Number of offences committed

Table 4.6 *Average offences per offender in self-reports*

Offence type	Age			
	15-18 (389)	27-32 (378)	42-47 (365)	All ages (403)
Burglary	8.1	2.0	–	7.5
Theft of vehicle	7.0	10.9	–	8.3
Theft from vehicle	8.8	10.1	–	10.0
Shoplifting	19.8	11.4	23.1	21.5
Theft from machine	7.3	4.3	–	7.2
Theft from work	*	21.2	21.6	25.5
Fraud	*	41.3	33.1	50.1
Assault	13.1	7.2	2.8	15.5
Drug use	*	269.7	326.0	426.9
Vandalism	7.6	–	–	7.5
Any offence (7)	23.8	9.7	6.8	27.6

* Not known.

– Based on five offenders or less.

"Any offence" data excludes theft from work, fraud and drug use.

The "all ages" N is 403 because males were included if they were known at one or more ages.

Table 4.6 shows the average number of self-reported offences per self-reported offender in three age ranges, 15–18, 27–32 and 42–47. (The exact number of offences committed was not asked at age 10–14.) Over seven offences (excluding theft from work, fraud and drug use) in these three age ranges, there was an average of 28 self-reported offences per offender. This number was highest at age 15–18 (24), decreasing to ten at age 27–32 and seven at age 42–47. For specific types of offences, the average number of offences per offender was 7–10 for burglary, theft of vehicles, theft from vehicles, theft from machines and vandalism. It was 16 for assault, 22 for shoplifting, 26 for theft from work, 50 for fraud and over 400 for drug use. (A maximum of 100 offences of each type at each age was counted, except for drug use, where the maximum was set at 1,000.)

The average number of official offences per official offender was always between one and 1.5 for each type of crime. For example, it was rare for a shoplifter to be convicted more than once for shoplifting at ages 15–18, 27–32 and 42–47: in total 18 shoplifters were convicted for 21 shoplifting offences. At age 15–18, 76 offenders had 151 convictions, or an average of 2.0 each. At age 27–32, 33 offenders had 48 convictions (1.5 each), and at age 42–47 16 offenders had 23 convictions (1.4 each). For eight offences at these three ages together, 98 offenders had 222 convictions, or 2.3 each.

Ratio of self-reported to official offences

Table 4.7 shows the ratio of self-reported to official offences for all males (convicted or unconvicted). Over seven offences at three ages, there was an average of 21 self-reported offences and 0.5 convictions per male. Hence, the ratio of self-reported to official offences was about 39 to 1 according to self-reports; an average of 39 offences were committed for each conviction. Disaggregating, there were roughly three self-reported offenders per convicted offender. Each self-reported offender committed about 28 self-reported offences on average (Table 4.6), whereas each convicted offender was convicted just over twice on average. Therefore, the frequency of self-reported offending was about 12 times the frequency of official offending ($27.6/2.3$). Multiplying 3.2 times as many self-reported offenders by 12 times as many self-reported offences per offender produces the overall 39 to 1 ratio.

Assault was the least comparable offence in self-reports and convictions, because many self-reported assaults might not have led to recorded convictions for assault. If assaults had been excluded, the overall 39 to 1 ratio would have decreased to 23 to 1.

Table 4.7 *Ratio of self-reported to official offences*

Offence type	Self-reported		Official		Ratio
	Per male	N	Per male	N	
Burglary	0.9	403	0.15	406	5.8
Theft of vehicle	1.3	403	0.15	405	9.2
Theft from vehicle	1.5	403	0.04	405	36.6
Shoplifting	4.0	403	0.05	406	76.8
Theft from machine	1.4	403	0.03	405	47.1
Theft from work*	7.3	390	0.01	396	1463.0
Fraud*	32.3	390	0.04	396	808.5
Assault	10.7	403	0.08	405	132.2
Drug use*	104.0	390	0.03	396	4159.8
Vandalism	1.6	403	0.05	405	30.1
(For 7 offences)					
Age 15-18	17.3	389	0.37	406	46.5
Age 27-32	3.9	378	0.12	396	32.6
Age 42-47	1.1	365	0.06	390	16.8
All ages	21.4	403	0.55	406	38.7

Notes: Age figures based on seven offences, excluding theft from work, fraud and drug use.

* Based only on two ages, 27-32 and 42-47.

The ratio of self-reported to official offending was relatively low for burglary (6) and theft of vehicles (9). Hence, about one in six burglaries and one in nine thefts of vehicles resulted in a conviction. This ratio was higher for vandalism (30), theft from vehicles (37), theft from machines (47) and shoplifting (77). It was very high for assault (132), fraud (over 800), theft from work (nearly 1,500) and drug use (over 4,000). It decreased from 47 at age 15–18 to 33 at age 27–32 and 17 at age 42–47.

The ratio of offences to convictions is usually greater when offences are based on national victim survey data. In England and Wales in 1981, for example, there were an estimated 54 reported burglaries per conviction for burglary and 19 reported vehicle thefts per conviction for vehicle theft (Farrington and Jolliffe, 2004).

For some purposes (e.g. the evaluation of treatment interventions), it is important to estimate the number of self-reported offences per conviction, in order to scale up from recorded convictions to offences committed and hence to estimate how many offences might be saved by a particular intervention programme. Table 4.8 shows the number of self-reported offences committed by convicted compared with unconvicted males (for males with both self-reports and convictions known).

Table 4.8 *Ratio of self-reported to official offences, by conviction status*

	Unconvicted			Convicted				
	SRD	N	Mean	SRD	N	Mean	Convs.	Ratio
Burglary	193	358	0.5	167	41	4.1	59	2.8
Theft of vehicle	311	356	0.9	231	43	5.4	59	3.9
Theft from vehicle	459	383	1.2	130	16	8.1	16	8.1
Shoplifting	1307	383	3.4	302	16	18.9	19	15.9
Theft from machine	451	392	1.2	119	7	17.0	12	9.9
Assault	3633	373	9.7	683	26	26.3	33	20.7
Vandalism	501	380	1.3	129	19	6.8	21	6.1
Age 15-18	3265	317	10.3	3466	72	48.1	144	24.1
Age 27-32	1057	343	3.1	436	31	14.1	45	9.7
Age 42-47	347	349	1.0	45	10	4.5	19	2.4
All ages	3864	303	12.8	4752	96	49.5	219	21.7

Notes: SRD = number of self-reported offences

N = Number of males;

Convs. = number of convictions

Ratio = number of self-reported offences divided by number of convictions.

For example, 167 of the 360 burglaries (46%) that were self-reported (at ages 15–18, 27–32 or 42–47) were committed by 41 males who were convicted for burglary (during the same age ranges) and 193 (54%) were committed by 358 males who were not convicted for burglary. Not surprisingly, the convicted males burgled at a much higher rate than the unconvicted males (4.07 compared with 0.54 per male, or a ratio of 7.5 to 1). The ratio of self-reported burglaries to convictions for the convicted males was 167 to 59, or 2.8 to 1. This is considerably less than the ratio for all males (shown in Table 4.7) of 5.8 to 1.

For all offences at all ages, 4,752 offences (55% of all self-reported offences) were committed by 96 convicted males, and 3,864 (45%) were committed by 303 unconvicted males. The convicted males offended at a much higher rate than the unconvicted males (49.5 compared with 12.8 self-reported offences per male, or a ratio of 3.9 to 1). The ratio of self-reported offences to convictions for the convicted males was 4,752 to 219, or 22 to 1. This is considerably less than the ratio for all males (shown in Table 4.7) of 39 to 1. (If assaults had been excluded, the ratio of self-reported offences to convictions for the convicted males would have been 14 to 1.)

These estimates are based on small numbers and on an incomplete range of ages. Nevertheless, they show that the estimated probability of an offence being followed by a conviction is very small. Even for convicted males, the ratio of self-reported offences to convictions was generally high, except at age 42–47, where the number of convicted males was very small.

It should be pointed out that the estimated probability of an offence being followed by a conviction in this report underestimates the probability of an offence being detected by the police. "Convictions" in this report exclude informal warnings, formal cautions before age 40, and offences taken into consideration.

Summary

The prevalence of self-reported offending was high at younger ages. Three-quarters of the men reported at least one of eight types of offences at ages 10–14 and 15–18 (compared with 11% and 19%, respectively, who were convicted for these offences at these ages). However, this prevalence fell to half at age 27–32 (compared with 9% convicted) and a quarter at age 42–47 (compared with 5% convicted). Almost all of the men (93%) reported at least one offence at one age, compared with 29 per cent who were convicted for at least one of these offences at one of these ages. There was a significant overlap between convicted and self-reported offenders for all offences at all ages.

Continuity in offending from one age to the next was significant according to self-reports. For example, 45 per cent of those who reported an offence at age 27–32 also reported an offence at age 42–47, compared with 13 per cent of those who denied offending at age 27–32. Generally, continuity was greater according to convictions than according to self-reports.

Over seven offences at three ages (15–18, 27–32 and 42–47), there were an average of 39 self-reported offences for every conviction. This ratio decreased from age 15–18 (47) to age 27–32 (33) and age 42–47 (17). It was lowest for burglary (6) and theft of vehicles (9). Nearly half of all self-reported offences were committed by unconvicted men. When the analysis was restricted to convicted men, there were an average of 22 self-reported offences for every conviction, and the lowest ratios were for burglary (3) and theft of vehicles (4).

Measuring life success

West and Farrington (1977) entitled their book on the age 18 follow-up "The Delinquent Way of Life" because they found that delinquency was only one element of a larger constellation of antisocial features. They concluded (p 158) that:

The data collected at age 18 showed that, whatever aspect of life was under consideration, virtually every comparison suggested that the convicted delinquents were more deviant. They were less socially restrained, more hedonistic, more impulsive, more reckless and distinctly more aggressive and prone to physical violence than their non-delinquent peers. They smoked more, drank more and gambled more. They had a faster life style, they went out more, they visited bars, discotheques and parties more often, they had more contacts with girls, they were more sexually precocious and sexually promiscuous, they avoided educational pursuits, evening classes or reading books, they earned more from highly paid unskilled jobs with poor future prospects, but they spent more, saved less, and were more frequently out of work and in debt... Reports of conflicts with parents, and an expressed preference for living away from the parental home, were common among the delinquents... These generally antisocial characteristics associated with delinquency tended to occur together, so that the typical antisocial individual had several such features.

Psychiatrists and psychologists have developed measures of antisocial personality and psychopathy that depend on problems in accommodation, employment, relationships, fighting, drug or alcohol abuse, mental health problems and offending (Farrington, 1991a). Measures of life success based on employment, relationships, substance abuse, mental health (etc.) have been constructed by social researchers (e.g. Werner and Smith, 2001).

When the men were aged 32, a composite measure of life success was developed. It was expected that the precise criteria chosen would be relatively unimportant because much the same results would be obtained with any combination of life success criteria. In other words, almost any composite measure would lead to a similar system of identification of more or less successful individuals. The life success measure at age 32 was based on the following criteria (Farrington, 1989b):

1. Satisfactory accommodation history.
2. Satisfactory cohabitation history.
3. Successful with children.
4. Satisfactory employment history.
5. Not involved in fights in the last five years.
6. No substance use in the last five years.
7. No self-reported offences (other than theft from work or tax fraud) in the last five years.
8. Satisfactory mental health (score four or less on the General Health Questionnaire).
9. No convictions in the last five years.

Each man was scored according to the percentage of these nine criteria on which he was considered successful. Where a man was not known or not applicable on one criterion, for example if he had no children, the percentage score was based on the remaining eight criteria. Previous work on the survey showed that men with a life success score of 67 per cent or greater (succeeding on six or more of the nine criteria) were also, independently, considered by the interviewers to be leading successful lives (Farrington *et al.*, 1988a, 1988b). Conversely, the men with lower success scores (93 men out of 378, or 25%) were considered to be leading relatively unsuccessful lives.

Life success at age 48

For the present follow-up at age 48, the aim was to develop life success scores at ages 32 and 48 that were directly comparable, so that it was possible to study changes in life success over time. Many of the same questions were asked at the two ages. It was necessary to modify the age 32 scores because the criterion of “successful with children” was less relevant at age 48, when many of the men’s children had left home (and some had children of their own). While it was reasonable to use “child living elsewhere” as an unsatisfactory feature at age 32, this was not reasonable at age 48. Consequently, the criterion of “successful with children” was dropped.

Table 5.1 summarises the criteria of life success that were used in this report. The fraction of men who were home owners as opposed to renters increased from about half at age 32 to about two-thirds at age 48. The measure of poor home conditions was based on the interviewer’s rating at age 32, but this was not used at age 48 because of concerns that the standards for what was (for example) “dirty” or “damp” might have been different for the different cohorts of interviewers. In the present report, the man’s accounts (in response to the same questions) were used at both ages, about whether his home had structural problems,

overcrowding, damp, heating problems, lack of privacy or vermin, and whether there were problems with neighbours or with dirt, violence or noise in the area. About 70–75 per cent of men reported none of these problems at ages 32 and 48. About 70 per cent of the men had residential stability at age 32, with only one or two addresses in the past five years, compared with 90 per cent at age 48.

Table 5.1 *Measuring life success at ages 32 and 48*

Criteria	Percent at age 32 (378)	Percent at age 48 (365)
(1) Satisfactory accommodation history	67.5	79.7
Home owner	48.4	66.0
Home conditions not poor	73.6	68.6
1-2 addresses in last 5 years	71.6	90.4
(2) Satisfactory cohabitation history	76.7	75.9
Living with female partner	83.9	81.9
Married/cohabiting 5 years or more	59.3	61.9
Not divorced in last 5 years	88.4	92.1
Gets on well with female partner	92.4	87.7
(3) Satisfactory employment history	76.0	81.6
Currently employed	88.1	92.2
Social class not low	74.7	77.1
Take-home pay not low	75.0	84.1
Unemployed 0-9 months in last 5 years	83.0	90.8
(4) Not involved in fights	62.9	85.5
(5) Satisfactory alcohol use	62.1	78.6
Not driven after drinking	56.5	85.8
Not heavy drinker	78.5	85.2
Not binge drinker	65.9	71.8
CAGE score 0-1	71.4	76.2
(6) No drug use	80.6	82.5
Not taken cannabis	81.6	84.9
Not taken other drug	90.5	92.9
(7) No self-reported offence (of 6)	88.6	97.0
(8) General Health Questionnaire score 0-4	76.2	83.6
(9) Not convicted in last 5 years	88.6	91.8
Successful life (score 6+)	78.0	88.5

The measure of “satisfactory accommodation history” was based on satisfactory ratings on two or more of: home owner, home conditions not poor, only one or two addresses. About two-thirds of the men were considered to have a satisfactory accommodation history at age 32, compared with 80 per cent at age 48.

About three-quarters of men at each age were living with a wife or female partner. About 60 per cent had been married or cohabiting for five years or more. About 90 per cent had not been divorced in the previous five years, and about 90 per cent said that they got on well with their wife or female partner. About 75–80 per cent were considered to have a satisfactory cohabitation history at each age, because they were satisfactory on at least three of these four features.

About 90 per cent of men at each age were currently employed. About three-quarters at each age had professional, non-manual or skilled manual jobs according to the socio-economic group classification of the Office for National Statistics; only about a quarter had semi-skilled or unskilled manual jobs. A quarter of the men were identified at age 32 as having low take-home pay (less than £120 per week at that time). Between 1985 and 2001 the retail price index roughly doubled (from 91 to 174, taking January 1987 = 100), so the criterion for low take-home pay at age 48 was set at less than £240 per week. About 16 per cent of the men had comparably low take-home pay at age 48. The fraction of men who had been unemployed for nine months or less in the previous five years increased from 83 per cent at age 32 to 91 per cent at age 48. The combined measure of “satisfactory employment history” required satisfactory ratings on at least three of these four criteria, and the percentage of men who were considered satisfactory increased from 76 per cent at age 32 to 82 per cent at age 48.

Only 15 per cent of the men at age 48 had been involved in physical fights in which blows had been struck (in the last five years), compared with 37 per cent at age 32. Fights in the course of work as a police officer, prison officer or security guard, and men who were victimised without fighting back, were not counted.

At age 32, the “no substance use” criterion of life success was based on the absence of heavy drinking, cannabis use and other drug use. However, it was considered desirable to have separate drinking and drug use criteria.

At age 48, 86 per cent said that they had not driven after drinking ten units or more of alcohol in the last five years, compared with 56 per cent at age 32. (One unit of alcohol corresponds to a half-pint of beer or cider, a single measure of spirits, or a glass of wine;

the consumption of ten or more units of alcohol would almost certainly lead to a failure to pass the British breathalyser test, which sets a limit of 80 mg. of alcohol per 100 ml. of blood.) About 85 per cent were not heavy drinkers at age 48, compared with 79 per cent at age 32, because they did not drink 40 or more units of alcohol per week. Over 70 per cent were not binge drinkers at age 48, compared with two-thirds at age 32, because they had not drunk 13 or more units in one evening in the last month. About three-quarter of men at each age were identified as probably not alcoholics because they answered "yes" to no more than one of the following questions (the CAGE questionnaire; see Mayfield, McLeod and Hall, 1974).

1. Have you ever felt annoyed by criticism of your drinking?
2. Have you ever had guilty feelings about drinking?
3. Have you ever started off the day with a drink?
4. Have you ever thought you should cut down on drinking?

The percentage of men considered to have a satisfactory drinking history (satisfactory on at least three of the four criteria) increased from 62 per cent at age 32 to 79 per cent at age 48.

The percentage of men who had not taken cannabis in the past five years increased only slightly from age 32 (82%) to age 48 (85%). Similarly, the percentage of men who had not taken some other drug (heroin, cocaine, amphetamine, hallucinogens, barbiturates) increased slightly from 90 per cent at age 32 to 93 per cent at age 48. Taking account of cannabis and other drugs, 81 per cent of the men were not drug users at age 32, compared with 82 per cent at age 48.

The percentage of men who self-reported one of six offences (burglary, theft of vehicles, theft from vehicles, shoplifting, theft from machines and vandalism) in the previous five years decreased from 11 per cent at age 32 to only three per cent at age 48. The 30-item General Health Questionnaire was used to detect men with non-psychotic psychiatric disorder (basically anxiety or depression). According to Goldberg (1978), anyone scoring five or more can be identified as a probable psychiatric case. The fraction of men who were not identified as probable psychiatric cases increased from 76 per cent at age 32 to 84 per cent at age 48. Finally, about eight per cent of the men were convicted at age 42–47, compared with 12 per cent at age 27–32.

The summary measure of life success

The nine criteria of life success used in the present report at ages 32 and 48 were as follows:

1. Satisfactory accommodation history.
2. Satisfactory cohabitation history.
3. Satisfactory employment history.
4. Not involved in fights in the least five years.
5. Satisfactory alcohol use.
6. No drug use in the last five years.
7. No self-reported offence (of six specified) in the last five years.
8. Satisfactory mental health (GHQ score four or less).
9. No convictions in the last five years.

Each man was scored at each age according to the percentage of these nine criteria on which he was considered successful. (Where there were missing data, the score could be based on less than nine criteria.) The new success score at age 32 correlated 0.91 with the old success score at age 32. The successful men were defined on this new scale as those who were successful on at least six of the nine criteria. Of the 285 men who had been classified as successful on the old scale at age 32, 272 were classified as successful on the new scale at age 32. Of the 93 men who had been classified as unsuccessful on the old scale at age 32, 70 were classified as unsuccessful on the new scale at age 32. Table 5.1 shows that the percentage of men who were considered to be living successful lives increased from 78 per cent at age 32 to 88 per cent at age 48. The good news, then, is that the vast majority of men were considered to be living successful lives, because they were successful on at least six out of nine criteria of life success.

At age 32, the reliability (Cronbach's alpha) of the life success scale was 0.65. This figure was not high partly because all variables were dichotomised but also because the GHQ score was not very highly correlated with some of the other criteria. Out of 36 comparisons of each criterion with every other one, only four were not significant at $p = .05$ (one-tailed because of directional predictions): accommodation versus drug use, fighting versus GHQ, drinking versus GHQ, and drug use versus GHQ. Nevertheless, it was considered useful to include a measure of mental health among the criteria for life success.

At age 48, the reliability of the life success scale was 0.52. Out of 36 comparisons of each criterion with every other one, 13 were not significant at $p = .05$ (one-tailed): accommodation versus drinking, cohabitation versus fighting, cohabitation versus drinking, employment versus drinking, employment versus fighting, cohabitation versus self-reported offending, employment

versus self-reported offending, fighting versus GHQ, drinking versus self-reported offending, drug use versus self-reported offending, drug use versus GHQ, self-reported offending versus GHQ, and convictions versus GHQ. As before, the GHQ was not strongly related to the other criteria, and neither was self-reported offending, possibly because of its very low prevalence at age 48 (3%).

Changes in life success over time

Table 5.2 compares life success criteria at ages 32 and 48 to address two different questions:

1. Was there a change in prevalence?
2. Was there continuity over time?

Table 5.2 Comparison of life success at ages 32 and 48

Criteria	Prevalence			Continuity			
	32	48	P	Y/Y	Y/N	OR	p
Satisfactory accommodation	68.0	80.5	.0001	88.8	62.8	4.7	.0001
Satisfactory cohabitation	77.6	76.2	NS	83.6	50.6	5.0	.0001
Satisfactory employment	76.3	81.4	.051	89.1	56.6	6.3	.0001
Not involved in fights	63.1	85.2	.0001	91.9	73.8	4.0	.0001
Satisfactory alcohol use	62.2	78.4	.0001	88.6	61.7	4.8	.0001
No drug use	81.0	82.4	NS	93.0	37.3	22.3	.0001
No self-reported offence	89.2	96.9	.0001	98.1	86.8	7.8	.0001
GHQ score 0-4	76.8	84.0	.014	87.5	72.7	2.6	.004
Not convicted	88.8	91.8	.082	96.0	59.1	16.5	.0001
Successful life	78.5	88.7	.0001	94.2	68.4	7.5	.0001

Note: Based on 353 men interviewed at both 32 and 48
 Y/Y = % satisfactory at 48 given satisfactory at 32
 Y/N = % satisfactory at 48 given unsatisfactory at 32
 OR = Odds Ratio
 NS = Not significant

These analyses are based on 353 men who were interviewed at both ages 32 and 48.

As an example, 81 per cent of the men were not drug users at age 32 and 82 per cent at age 48. These two percentages were not significantly different on the McNemar test (chi-squared = 0.36, 1 df.), showing that the prevalence of drug use did not change significantly. However, 93 per cent of non-drug users at age 32 were still non-drug users at age 48, compared with only 37 per cent of drug users at age 32 who had become non-

drug users at age 48. These percentages were significantly different (chi-squared = 112.0, $p < 0.0001$), with a very large odds ratio of 22.3 (confidence interval 11.4 - 43.6), showing a high degree of continuity in drug use over time.

Table 5.2 shows that the percentages of men with satisfactory accommodation, employment and drinking, no involvement in fights, no self-reported offending and good mental health significantly increased from age 32 to age 48. The prevalence of satisfactory cohabitation, drug use and no convictions did not change significantly. There was significant continuity over time in all measures of life success.

On all life success criteria, between 84 per cent and 98 per cent of successful men at age 32 continued to be successful at age 48. Hence, successful men tended to continue their successful lives. With the exception of drug use, more than half of unsuccessful men at age 32 became successful at age 48. As many as 87 per cent of self-reported offenders at age 32 were not offending at age 48, and 74 per cent of men who were involved in fights at age 32 were not involved at age 48.

The proportion of men leading successful lives increased from 78 per cent at age 32 to 88 per cent at age 48, largely because over two-thirds of men who had been unsuccessful at age 32 had become successful at age 48. Only six per cent of men who had been successful at age 32 had become unsuccessful at age 48. These results are encouraging. However, it must be pointed out that (except for convictions) all these results are based on self-reports. It is possible that the men became more circumspect as they got older and more concerned to present a respectable façade to the interviewer. Research on the validity of the interview at age 48 will be carried out but is beyond the scope of the present report.

Summary

Nine criteria of life success were measured comparably at ages 32 and 48. The vast majority of men (88%) were considered to be leading successful lives at age 48, since they were successful on at least six of the nine criteria. Life success increased between age 32 and 48; at age 32, 78 per cent of men were leading successful lives. There was significant continuity over time in all criteria of life success. For example, 94 per cent of successful men at age 32 were still successful at age 48, compared with two-thirds of unsuccessful men at age 32. Life success increased with age because successful men tended to stay successful and unsuccessful men tended to become successful.

6. Persisters, desisters and late onset offenders

Life success

Table 6.1 shows to what extent unconvicted men, persisters, desisters and late onset offenders were successful in different aspects of their lives at age 48. These categories of official offenders were defined in chapter 3: “persisters” were convicted both before and after their 21st birthday, “desisters” were convicted only before age 21, and “late onset offenders” were convicted only at age 21 or older. Unconvicted men were not convicted up to age 50.

Table 6.1 *Life success at age 48 of categories of offenders*

Success criteria	% of unconvicted (216)	% of desisters (47)	% of late onset (31)	% of persisters (65)
Satisfactory accommodation	83.8	83.0	80.6	64.6*
Satisfactory cohabitation	75.5	78.7	71.0	76.9
Satisfactory employment	87.0	87.2	74.2	63.1*
Not involved in fights	90.3	91.5	87.1	63.1*
Satisfactory alcohol use	85.2	70.2*	64.5*	67.7*
No drug use	89.8	83.0	74.2*	61.5*
No self-reported offending	98.1	97.9	96.8	92.3*
GHQ score 0-4	84.3	84.1	80.0	82.3
Not convicted**	100.0	100.0	76.3	66.7
Successful life	94.9	95.7	83.9*	64.6*

* = Significantly different from unconvicted ($p < 0.05$).

** Tests not carried out for not convicted in the previous five years.

The good news is that the majority of all groups were considered to be leading successful lives: 95 per cent of unconvicted men, 96 per cent of desisters, 84 per cent of late onset offenders and 65 per cent of persisters. The most important finding is that desisters were not significantly different from unconvicted men in seven out of eight areas or in their total success score. Desisters were significantly different at age 48 only in their alcohol use (70% of 47 desisters were satisfactory, compared with 85% of 216 unconvicted men: OR = 2.4, CI 1.2-5.2). Desisters were also somewhat (but not significantly) different in their drug use (83 per cent of desisters were not drug users, compared with 90% of unconvicted men: OR

= 1.8, CI 0.8-4.4). On all the other criteria, desisters and unconvicted men were very similar at age 48. Since only two per cent of desisters (1 male) reported an offence at age 48, it seems that they have truly desisted from offending by this age.

Late onset offenders were significantly different from unconvicted men in their alcohol and drug use (and not significantly different at the 5% level but significantly different at the 10% level in their employment). Only 24 per cent of late onset offenders had been convicted in the previous five years. Late onset offenders were generally less successful than unconvicted men (84% of 31 were considered successful compared with 95% of 216: OR = 3.6, CI 1.2-11.1).

Not surprisingly, persisters were leading the least successful lives at age 48, even though only one-third of them had been recently convicted. Nevertheless, overall two-thirds (65%) of persisters were leading successful lives at age 48 according to our criteria, compared with 95 per cent of unconvicted men (OR = 10.2, CI 4.6-22.5). Those persisters who were also current offenders were much less likely to be successful (20%) than those persisters who were not current offenders (84%). Persisters were significantly less successful than unconvicted men in every area of life except cohabitation and anxiety/depression (on the GHQ).

It might be considered surprising in Table 6.1 that the percentage who self-reported an offence in the previous five years was so much lower than the percentage convicted of an offence in the previous five years. For example, 33 per cent of persisters were convicted but only eight per cent self-reported an offence, and 24 per cent of late onset offenders were convicted but only three per cent self-reported an offence. However, it must be remembered that the convictions were based on 23 types of offences, whereas the self-reports were based on only six. When convictions were based on only the comparable six offences, nine per cent of persisters and 14 per cent of late onset offenders were convicted. Hence, the prevalence of convictions and self-reports were comparable for persisters but not for late onset offenders. Possibly late onset offenders were under-reporting at age 48.

Table 6.2 shows the corresponding results at age 32, when desisters were less likely to be leading successful lives than unconvicted men (79% of 52 desisters were successful, compared with 90% of 222 unconvicted men: OR = 2.3, CI 1.1-5.1). Desisters were significantly different from unconvicted men in fighting, drinking and self-reported offending (and significantly different at the 10% level but not at the 5% level in drug use: OR = 1.9, CI = 0.9-4.3). This was why Nagin, Farrington and Moffitt (1995, p.111), in testing Moffitt's theory using Cambridge Study data up to age 32, concluded that:

By age 32 the work records of the adolescence-limiteds were indistinguishable from the never-convicted and substantially better than those of the chronic offenders. The adolescence-limiteds also seem to have established better relationships with their spouses than the chronics. The seeming reformation of the adolescence-limiteds, however, was less than complete. They continued to drink heavily and use drugs, get into fights, and commit criminal acts (according to self-reports).

Table 6.2 Life success at age 32 of categories of offenders

Success criteria	% of unconvicted (222)	% of desisters (52)	% of late onset (35)	% of persisters (65)
Satisfactory accommodation	71.6	71.2	68.6	50.8*
Satisfactory cohabitation	78.8	78.8	80.0	64.6*
Satisfactory employment	82.4	82.0	70.6	52.3*
Not involved in fights	72.5	54.9*	62.9	33.8*
Satisfactory alcohol use	73.9	47.1*	62.9	32.3*
No drug use	88.7	80.4	80.0	52.3*
No self-reported offending	95.9	88.5*	85.7*	64.6*
GHQ score 0-4	80.2	75.0	65.7	67.7*
Not convicted**	100.0	100.0	71.1	51.4
Successful life	89.6	78.8*	68.6*	41.5*

* = Significantly different from unconvicted ($p < 0.05$).

** Tests not carried out for not convicted in the previous five years.

In this previous research “adolescence-limited” offenders were those who were not convicted after age 22.

Late onset offenders were significantly different from unconvicted men at age 32 in their self-reported offending (and they were significantly different at the 10% level but not at the 5% level in showing more anxiety-depression on the GHQ: 66 per cent of 35 late onset offenders were successful on the GHQ compared with 80 per cent of 222 unconvicted men: OR = 2.1, CI = 0.98-4.6). Late onset offenders were also different (but not significantly so) in their employment histories (OR = 2.0) and drug abuse (OR = 2.0). According to the total success score, late onset offenders were living less successful lives than unconvicted men at age 32 (69% were considered successful, compared with 90% of unconvicted men: OR = 4.0, CI 1.7-9.1).

Not surprisingly, persisters were significantly less successful than unconvicted men at age 32 in all aspects of their lives. Only 42 per cent of persisters were living successful lives at age 32, compared with 90 per cent of unconvicted men (OR = 12.2, CI 6.3 -23.5).

Comparing Tables 6.1 and 6.2, it can be seen that all four groups became more successful between ages 32 and 48. The percentage leading successful lives increased from 90 per cent to 95 per cent for unconvicted men, from 79 per cent to 96 per cent for desisters, from 69 per cent to 84 per cent for late onset offenders, and from 42 per cent to 65 per cent for persisters.

Childhood risk factors

Table 6.3 shows to what extent persisters, desisters, late onset offenders and unconvicted men at age 50 possessed key risk factors at age 8–10. For these analyses, each variable at age 8–10 was dichotomized, as far as possible, into the “worst” quarter of males (e.g. the quarter with lowest income or lowest intelligence) versus the remainder. This was done in order to compare the importance of different variables and also to permit the “risk factor” approach. Because most variables were originally classified into a small number of categories, and because fine distinctions between categories could not be made very accurately, this dichotomizing did not usually involve a great loss of information. The approximate one-quarter/three-quarters split was chosen to match the prior expectation that about one-quarter of the sample would be convicted as juveniles. A major advantage of dichotomization is that it makes the results easily understandable (see also Farrington and Loeber, 2000).

In order to draw valid conclusions, it is important to have complete data. All boys were known on most of the childhood risk factors shown in Table 6.3 (13 out of 21). The amount of missing data was one per cent or less in three cases, four to five per cent in three cases, six per cent for low junior school attainment and seven per cent for poor parental supervision. The percentage of boys identified by each risk factor is shown in parentheses.

The key childhood risk factors shown in Table 6.3 have been used and described in many previous publications (e.g. West and Farrington, 1973; for recent examples, see Farrington, 2000a, 2000c, 2001a, 2002a, 2006a, 2006b, 2006c). Briefly, low social class (socio-economic status) indicated that the family breadwinner (usually the father) had an unskilled manual job. Low family income and poor housing were rated by the study social workers who interviewed the families; poor housing indicated dilapidated premises. Large family size identified families with five or more children of the boy’s mother up to his tenth birthday.

Table 6.3 *Childhood risk factors versus categories of convicted offenders*

Age 8-10 risk factors (% identified)	% of unconvicted (237)	% of desisters (53)	% of late onset (38)	% of persisters (70)
Socio-economic				
Low social class (19)	17.3	17.0	18.4	30.0*
Low family income (23)	18.1	24.5	15.8	41.4*
Poor housing (37)	27.4	58.5*	52.6*	45.7*
Large family size (24)	16.0	28.3*	31.6*	44.3*
Family				
Convicted parent (27)	17.3	41.5*	26.3	50.0*
Delinquent sibling (11)	6.8	13.2	7.9	25.7*
Young mother (22)	16.9	22.6	21.1	38.6*
Poor child-rearing (24)	18.9	34.0*	16.7	34.4*
Poor supervision (19)	12.5	22.4	22.2	37.1*
Disrupted family (22)	15.2	28.3*	28.9*	38.6*
School				
Low non-verbal IQ (25)	18.1	34.0*	36.8*	35.7*
Low verbal IQ (25)	19.6	26.4	34.2*	39.1*
Low junior attainment (23)	15.1	30.0*	32.4*	41.5*
Individual				
High daring (30)	20.5	47.2*	23.7	48.6*
Lacks concentration (20)	13.9	28.3*	27.0*	30.0*
High impulsiveness (25)	19.8	32.1	34.2*	31.4*
Low popularity (32)	28.0	25.5	34.3	47.0*
High nervousness (24)	25.6	10.0*	38.9	21.9
Behaviour				
Troublesomeness (22)	13.1	37.7*	18.4	38.6*
Composite				
Antisocial (24)	13.5	37.7*	21.1	44.3*
Vulnerability (15)	6.3	26.4*	21.1*	35.7*

* Significantly different from unconvicted ($p < 0.05$)

Turning to family factors, a convicted parent and a convicted older sibling were measured up to the boy's tenth birthday and referred only to biological relatives. A young mother identified mothers who were teenagers at the time of their first birth. Poor child-rearing, rated by the social workers, was a combination of parental attitude and discipline (harsh or erratic) and parental conflict. Poor parental supervision identified parents who had lax rules or did not know where the boy was when he went out. Boys from disrupted families were

those who had been separated from a parent (usually the father) up to the tenth birthday for reasons other than death or hospitalisation (usually through parental disharmony).

Low non-verbal IQ referred to an IQ score of 90 or less on the Progressive Matrices test. Low verbal IQ identified boys in the lowest quartile on verbal comprehension and vocabulary tests. Low junior school attainment was based on a combination of Arithmetic, English and Verbal reasoning scores supplied by the schools.

Boys with high daring were those who took many risks (e.g. in traffic, climbing, exploring) according to parents and peers. Boys who lacked concentration or were restless in class were identified by teachers. High impulsiveness was based on clumsiness in three psychomotor tests, the Porteus Maze, the Spiral Maze and the Tapping test (for more details about all of these tests given at age 8–10, see West and Farrington, 1973). Low popularity was based on peer ratings, while nervous-withdrawn boys were rated by parents.

All the above risk factors could arguably cause offending in some way. Troublesomeness, rated by peers and teachers, identified the boys who were already behaving badly at age 8–10. Troublesomeness predicted offending not because it caused offending but because it measured the same underlying construct as offending (e.g. an antisocial personality) that tended to persist over time.

An antisocial personality scale at age 8–10 was developed, based on troublesomeness, conduct problems, difficult to discipline, dishonesty, stealing, getting angry, daring, lacks concentration, impulsiveness and truancy (Farrington, 1991a). About a quarter of the boys (24%) were identified as antisocial at age 8–10 because they possessed four or more out of these ten risk factors.

At an early stage (when the boys were juveniles), a background vulnerability score was developed, based on a convicted parent, low family income, large family size, poor child-rearing and low non-verbal IQ. The 63 boys with adverse ratings on three or more of these five factors were identified as vulnerable (West and Farrington, 1973, p.131).

Predicting offending

Table 6.3 shows that persisters differed significantly from unconvicted males on every risk factor except nervousness. Impulsiveness (OR = 1.9) and low social class (OR = 2.0) were the weakest predictors of persisters, while a convicted parent (OR = 4.8), a delinquent

sibling (OR = 4.8), large family size (OR = 4.2), poor parental supervision (OR = 4.1) and low junior attainment (OR = 4.0) were the strongest explanatory predictors (excluding troublesomeness, being antisocial, and vulnerability).

Desisters were significantly predicted by poor housing (OR = 3.7), high daring (OR = 3.5) and a convicted parent (OR = 3.4) especially, and they were significantly unlikely to be nervous (OR = 0.32). Persisters were significantly more likely than desisters to be unpopular (OR = 2.6) and (at the 10% level but not at the 5% level) significantly more likely to come from low-income families (OR = 2.2).

Late onset offenders were significantly predicted by poor housing (OR = 2.9), low junior school attainment (OR = 2.7) and low non-verbal IQ (OR = 2.6) especially. Unlike persisters and desisters, they had no significant tendency to be troublesome or antisocial at age 8–10. However, like persisters and desisters, they tended to come from vulnerable backgrounds (OR = 3.9). Late onset offenders were significantly more nervous (OR = 5.7) than desisters.

Prediction analyses

Table 6.4 shows independent predictors of offending outcomes based on forward stepwise logistic regression analyses (see Note on logistic regression at p.63). Only explanatory variables were included in these analyses as predictors (i.e. excluding troublesomeness, being antisocial, vulnerability). Compared with unconvicted men, persisters were predicted by a convicted parent, high daring, a delinquent sibling, a young mother, large family size (significant at the 10% level but not at the 5% level) and a disrupted family (significant at the 10% level but not at the 5% level). Compared with unconvicted men, desisters were predicted by poor housing, a convicted parent, high daring, low junior school attainment, low nervousness and a disrupted family (significant at the 10% level but not at the 5% level).

It can be seen that the two strongest independent predictors of persisters (a convicted parent and high daring) were also among the three strongest independent predictors of desisters. Also, persisters and desisters were not significantly different at age 8–10 on troublesomeness, being antisocial or vulnerability. The strongest independent predictors of persisters, compared with desisters, were low popularity and low family income (significant at the 10% level and not at the 5% level). Only two childhood risk factors independently predicted late onset offenders compared with unconvicted men: poor housing and low non-verbal IQ. This confirms the impression that late onset offenders were not noticeably different in their behaviour at age 8–10 compared with unconvicted men.

Table 6.4 *Logistic regression analyses for categories of offenders*

Criterion	Predictors	LRCS change*	p
(a) Persisters (vs. unconvicted)	Convicted parent	26.2	.0001
	High daring	16.5	.0001
	Delinquent sibling	14.1	.0002
	Young mother	6.3	.012
	Low popularity	3.9	.050
	Disrupted family	3.1	.078
	Large family size	3.2	.072
(b) Desisters (vs. unconvicted)	Poor housing	17.9	.0001
	Convicted parent	7.9	.005
	High daring	6.1	.014
	Low junior attainment	5.7	.017
	High nervousness(-)	6.0	.015
(c) Persisters (vs. desisters)	Disrupted family	3.1	.080
	Low popularity	5.8	.016
(d) Late Onset (vs. unconvicted)	Low family income	3.1	.080
	Poor housing	9.1	.003
(e) Convicted (vs. unconvicted)	Low non-verbal IQ	4.9	.028
	Convicted parent	25.4	.0001
	High daring	17.3	.0001
	Low junior attainment	17.0	.0001
	Poor housing	11.9	.0006
	Disrupted family	3.8	.053
	Large family size	3.5	.062

Note: LRCS = Likelihood Ratio Chi-squared.

(-) = Negatively related

* when predictor added to equation

For comparison, the strongest independent predictors of convicted versus unconvicted males are also shown in Table 6.4. These were a convicted parent, high daring, low junior school attainment, poor housing, a disrupted family and large family size. These results are highly concordant with the results of previous regression analyses carried out in this study and mentioned in chapter 1.

The key independent risk factors at age 8–10 typically fell into six major categories:

1. disruptive child behaviour (e.g. troublesomeness);
2. criminality in the family (a convicted parent, a delinquent sibling);
3. low IQ or low school attainment;
4. family factors, including poor child-rearing, a disrupted family and a young mother;
5. high daring, impulsiveness, or poor concentration; and
6. economic deprivation (low income, poor housing, large family size).

In many regression analyses, one risk factor from each of these groups proved to be a significant independent predictor of offending. (As mentioned, troublesomeness was not included in the present regression analyses, which focussed only on explanatory predictors.)

It would have been possible to develop prediction scores from the logistic regression analyses and investigate how far they predicted the different offender groups. However, this retrospective exercise would have overestimated the true degree of predictive efficiency. Table 6.5 provides a more realistic estimate. It assesses how far the offender groups could be predicted at age 8–10 on the basis of early measures of background (vulnerability) and behaviour (troublesomeness).

The percentage who became persisters increased from ten per cent of those with 0–1 background factors to 50 per cent of those with 4–5 background factors. (The five background factors are listed above.) Conversely, the percentage who remained unconvicted decreased from 67 per cent of those with 0–1 background factors to 19 per cent of those with 4–5 background factors. However, the percentage who became desisters increased less markedly (from 12% of those with 0–1 factors to 19% of those with 4–5 factors) and the percentage who became late onset offenders hardly increased at all (from 11% of those with 0–1 factors to 13% of those with 4–5 factors).

The percentage who became persisters also increased with increasing troublesomeness at age 8–10, from eight per cent of low troublesome boys to 32 per cent of high troublesome boys. Similarly, the percentage who became desisters increased from six per cent of low troublesome boys to 24 per cent of high troublesome boys. Conversely, the percentage who remained unconvicted decreased from 78 per cent of low troublesome boys to 36 per cent of high troublesome boys. However, the percentage who became late onset offenders showed no tendency to increase with troublesomeness at age 8–10.

Table 6.5 *Predicting categories of offenders*

	Unconvicted (237)	Desisters (53)	Late onset (38)	Persisters (70)
(a) Vulnerability score				
0	110	13	13	16
(%)	(72.4)	(8.6)	(8.6)	(10.5)
1	68	18	15	11
(%)	(60.7)	(16.1)	(13.4)	(9.8)
2	44	8	2	18
(%)	(61.1)	(11.1)	(2.8)	(25.0)
3	9	8	4	9
(%)	(30.0)	(26.7)	(13.3)	(30.0)
4-5	6	6	4	16
(%)	(18.8)	(18.8)	(12.5)	(50.0)
(b) Troublesomeness				
Low	111	8	11	12
(%)	(78.2)	(5.6)	(7.7)	(8.5)
Low average	64	12	13	17
(%)	(60.4)	(11.3)	(12.3)	(16.0)
High average	31	13	7	14
(%)	(47.7)	(20.0)	(10.8)	(21.5)
High	31	20	7	27
(%)	(36.5)	(23.5)	(8.2)	(31.8)

Antisocial personality

Antisocial personality scores were derived at ages 12–14 and 15–18 in a similar way to the score at age 8–10 described above (Farrington, 1991a). It might be expected that persisters and desisters would have become more antisocial between ages 8–10 and 15–18 because the antisocial scores were increasingly coinciding with their offending rather than predicting it. Assuming that offending is one element of a larger antisocial lifestyle, this lifestyle should develop coincidentally with the offending. However, the key question is whether late onset offenders were becoming more antisocial between ages 8–10 and 15–18, and hence whether their behaviour showed early signs that they would later (from age 21) become convicted offenders. Compared with unconvicted men, they were not highly antisocial at age 8–10, but they might have become antisocial by age 15–18.

Table 6.6 divides up the antisocial personality score at each age into low (the best quarter), medium (the middle half) and high (the worst quarter). At all three ages, persisters and desisters had much higher antisocial scores than unconvicted males, and the contrasts became greater at older ages. The percentages in the worst quarter at age 8–10 were 14 per cent of unconvicted males, 38 per cent of desisters and 44 per cent of persisters. At age 15–18, the corresponding percentages were five per cent of unconvicted males, 47 per cent of desisters and 71 per cent of persisters. Hence, persisters and desisters became relatively more antisocial between ages 8 and 18.

Table 6.6 *Antisocial scores versus offender groups*

	Unconvicted (237)	Desisters (53)	Late onset (38)	Persisters (70)
(a) Antisocial at 8-10				
Low	65	7	4	6
(%)	(27.4)	(13.2)	(10.5)	(8.6)
Medium	140	26	26	33
(%)	(59.1)	(49.1)	(68.4)	(47.1)
High	32	20	8	31
(%)	(13.5)	(37.7)	(21.1)	(44.3)
(b) Antisocial at 12-14				
Low	83	7	12	1
(%)	(35.0)	(13.2)	(31.6)	(1.4)
Medium	134	27	21	28
(%)	(56.5)	(50.9)	(55.3)	(40.0)
High	20	19	5	41
(%)	(8.4)	(35.8)	(13.2)	(58.6)
(c) Antisocial at 15-18				
Low	93	5	9	3
(%)	(41.2)	(9.8)	(24.3)	(4.4)
Medium	121	22	24	17
(%)	(53.5)	(43.1)	(64.9)	(25.0)
High	12	24	4	48
(%)	(5.3)	(47.1)	(10.8)	(70.6)

This was much less true for the late onset offenders. The percentages in the worst quarter were 21 per cent of late onset offenders compared with 14 per cent of unconvicted males at age 8–10; 13 per cent of late onset offenders compared with eight per cent of unconvicted males at age 12–14; and 11 per cent of late onset offenders compared with five per cent of unconvicted males at age 15–18. None of these percentage differences was statistically

significant. While late onset offenders always tended to be more antisocial than unconvicted males, there was little tendency for late onset offenders to become increasingly antisocial between ages 8 and 18. On the contrary, because persisters and desisters were becoming relatively more antisocial between ages 8 and 18, unconvicted men and late onset offenders were becoming relatively less antisocial.

Summary

The life success of persisters (those convicted both before and after age 21), desisters (those convicted only before age 21) and late onset offenders (those convicted only after age 21) was investigated. The life success of all three groups improved from age 32 to age 48. Two-thirds of persisters were considered to be successful at age 48, compared with only 42 per cent at age 32; 84 per cent of late onset offenders were successful at age 48, compared with 69 per cent at age 32; and 96 per cent of desisters were successful at age 48, compared with 79 per cent at age 32. The comparable figures for unconvicted men were 90 per cent successful at age 32 and 95 per cent successful at age 48.

Importantly, desisters were very similar to unconvicted men in their life success at age 48, whereas desisters had been less successful at age 32. The only areas of life where desisters were different from unconvicted men at age 48 were in alcohol and drug use.

Almost all childhood risk factors measured at age 8–10 predicted persisters compared with unconvicted men. However, fewer child risk factors predicted desisters or late onset offenders. The most important predictors of persisters and desisters were a convicted parent and high daring. Persisters were more likely than desisters to be unpopular or to come from low-income families. Late onset offenders were predicted by poor housing and low non-verbal IQ. Unlike persisters and desisters, late onset offenders were not significantly troublesome or antisocial at age 8–10. Similarly, unlike persisters and desisters, late onset offenders were not significantly antisocial at ages 12–14 or 15–18. Hence, it seems likely that their antisocial behaviour did not develop until after age 21. It is important to investigate later factors that may have caused their late onset, but that is beyond the scope of the present report.

Note on logistic regression

Logistic regression is a multivariate statistical technique which examines whether an underlying factor (e.g. poor parental supervision, low family income) that is thought to be linked with the outcome variable of interest (e.g. being an offender) is statistically important once other underlying factors are controlled for. A whole range of factors may be predictors of whether someone is an offender, but these factors may also be related to each other. Logistic regression allows one to examine whether an underlying explanatory variable has a significant effect in its own right on the outcome variable of interest.

The forward stepwise logistic regression described in this report selects those variables, in order of their strength of prediction, that are statistically associated with the outcome variable independently of the other explanatory variables included in the model. This does not necessarily imply a causal relationship, and care is needed in selecting variables for inclusion.

The odds ratios that are produced show the change in relative odds of experiencing a particular event (e.g. offending) if the value of the variable under consideration changes from one category to the next (controlling for all other explanatory variables). Where odds ratios are higher than one, people with that particular attribute have relatively higher odds of offending, for example, than those who do not have this attribute. Conversely, odds ratios of less than one indicate relatively lower odds of offending for the group with that particular attribute.

As the odds ratio increases the relative risk of the event also increases. However, the change in odds should not be interpreted as the change in the relative risk (e.g. an odds ratio of two does not mean that the relative risk of an event is doubled). For example, two groups with respective risks of 75 per cent and 60 per cent for a particular outcome have an odds ratio equal to two (i.e. the respective odds are 3:1 and 6:4 and the odds ratio is $(3/1)/(6/4)=2$). Similarly, two groups with respective risks of 33 per cent and 20 per cent also have an odds ratio equal to two (i.e. $(1/2)/(1/4)=2$; the respective odds are 1:2 and 1:4).

The main policy implications that might be drawn from the Cambridge Study follow from the fact that the most prolific offenders start early and have long criminal careers. Almost all of those who were first convicted at ages 10–13 (91%) or 14–16 (84%) did not give up offending after the first offence. On the contrary, they continued offending (according to convictions) for an average of 13 years. Those who started at age 10–13 averaged nine convictions and those who started at age 14–16 averaged six convictions. In contrast, those who were first convicted at age 17 or older averaged only about two convictions each. Hence, an important policy aim should be to prevent (or postpone) the early onset of offending.

The Cambridge Study shows the extent to which different types of offenders (persisters, desisters and late onset offenders) might have been predicted in childhood, at age 8–10. Risk assessment devices could be developed based on these results (see e.g. Howell, 2001). It is especially important to predict the length (or residual length) of criminal careers to ensure that valuable prison space is not wasted by incarcerating persons who are about to stop offending (Kazemian and Farrington, 2006).

According to the Cambridge Study, the most important childhood risk factors for offending are criminality in the family, poverty, impulsiveness, poor child-rearing and low school attainment (and also early antisocial behaviour of course). Impulsiveness can be reduced by cognitive-behavioural skills training programmes, child-rearing can be improved by parent training, and low school attainment can be reduced by pre-school intellectual enrichment programmes. It would also be desirable to implement measures designed to reduce childhood poverty. All these interventions should be targeted on children before age ten.

The basic idea of developmental or risk-focussed prevention is very simple: identify the key risk factors for offending and implement prevention techniques designed to counteract them (see Farrington, 2002b, 2007; Farrington and Welsh, 2007). There is often a related attempt to identify key protective factors against offending and to implement prevention techniques designed to enhance them. Longitudinal surveys are used to advance knowledge about risk and protective factors, and experimental and quasi-experimental methods are used to evaluate the impact of prevention and intervention programmes.

The Cambridge Study shows that nearly half of all offences are committed by unconvicted males. Therefore, while it would be justifiable to target intervention programmes on high-risk

persons who are likely to get convicted, it would also be desirable to implement primary prevention programmes targeting the whole community (see e.g. Coid, 2003).

High-quality evaluation research shows that many programmes are effective in reducing offending, and that in many cases the financial benefits of these programmes outweigh their financial costs. In estimating the benefits of intervention programmes, it is important to “scale up” from convictions to offences in order to determine how many crimes have been saved. The Cambridge Study indicates that amongst those studied, convicted males committed on average 22 offences per conviction. The most effective intervention programmes include general parent education, parent management training, pre-school intellectual enrichment programmes, child-skills training, teacher training, anti-bullying programmes, and multisystemic therapy (MST).

As an example, the most famous pre-school intellectual enrichment programme, designed to improve school attainment, is the Perry project carried out in Ypsilanti (Michigan) by Schweinhart and Weikart (1980). This was essentially a “Head Start” programme targeted on disadvantaged African American children. A small sample of 123 children were allocated (approximately at random) to experimental and control groups. The experimental children attended a daily pre-school programme, backed up by weekly home visits, usually lasting two years (covering ages 3–4). The aim of the “plan-do-review” programme was to provide intellectual stimulation, to increase thinking and reasoning abilities, and to increase later school achievement. This programme had long-term benefits (Schweinhart *et al.*, 2005). Up to age 40, the experimental children committed fewer offences, had higher school achievement, and earned more. For every \$1 invested in the programme, it was estimated that \$17 were saved by the community.

Child-skills training is also an effective technique. For example, Tremblay and his colleagues (1995) in Montreal identified disruptive (aggressive or hyperactive) boys at age six, and randomly allocated over 300 of them to experimental or control conditions. Between ages seven and nine, the experimental group received training designed to foster social skills and self-control. Coaching, peer modelling, role playing and reinforcement contingencies were used in small group sessions on such topics as “how to help”, “what to do when you are angry” and “how to react to teasing”. Also, their parents were trained using the parent management training techniques developed by Patterson (1982). This prevention programme was also successful in reducing later offending.

Since poor parental supervision and inconsistent discipline are important risk factors for delinquency, it is plausible that family-based prevention should succeed in reducing

offending (see Farrington and Welsh, 2003). The most important types of family-based programmes that are effective are home-visiting programmes (Olds *et al.*, 1998), parent training programmes (e.g. Sanders *et al.*, 2000; Scott *et al.*, 2001), home or community programmes with older children (e.g. Chamberlain and Reid, 1998) and Multi-Systemic Therapy or MST (Henggeler *et al.*, 1998).

It is generally true that, the more risk factors that a young person has, the more likely he or she will be to become delinquent. This encourages researchers to use multiple-component interventions that target multiple risk factors. Generally multiple-component interventions are more effective than single-component ones (Wasserman and Miller, 1998).

One of the most important multiple-component prevention experiments was carried out in Seattle by Hawkins and his colleagues (1999). They implemented a programme combining parent training, teacher training and child-skills training. About 500 first grade children (aged six) in 21 classes in eight schools were randomly assigned to be in experimental or control classes. The children in the experimental classes received special treatment at home and school which was designed to increase their attachment to their parents and their bonding to the school. Also, they were trained in interpersonal cognitive problem-solving. Their parents were trained to notice and reinforce socially desirable behaviour in a programme called "Catch them being good". Their teachers were trained in classroom management, for example to provide clear instructions and expectations to children, to reward children for participation in desired behaviour, and to teach children prosocial (socially desirable) methods for solving problems. This programme had long-term benefits. In the latest follow-up, at age 18, the full intervention group (those who received the intervention from grades 1–6) reported less violence, less alcohol abuse and fewer sexual partners than the late intervention group (grades 5–6 only) or the control group.

The Cambridge Study shows that offenders tend to be deviant in many aspects of their lives. This means that any measure that succeeds in reducing offending is likely to have benefits that go far beyond this. Early prevention that reduces offending will probably have wide-ranging benefits in reducing accommodation problems, relationship problems, employment problems, alcohol and drug problems, and aggressive behaviour. While all types of offenders become more successful as they get older, there is enormous scope for significant cost savings from effective early intervention programmes.

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Erratum

On page 47, line 6, "a quarter of men...were identified as probably not alcoholics" was amended to read "three-quarters of men...".