

1 The concentration of convictions in two generations of families

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Introduction

The main aim of this chapter is to investigate the concentration of offending in two successive generations of families in the Cambridge Study in Delinquent Development (CSDD). It has been known for many years that offending tends to be concentrated in certain individuals in a birth cohort. For example, Wolfgang, Figlio and Sellin (1972) found that 6% of a cohort of Philadelphia males accounted for 52% of all their offences up to age 18, and called these 6% the "chronic" offenders. Similar results have been obtained in several later studies (e.g. Blumstein, Farrington, & Moitra, 1985; Farrington & West, 1993; Piquero, Farrington, & Blumstein, 2007).

There has been much less research, however, on the concentration of offending in families. The first extensive analyses of this topic were completed by Farrington, Gundry, and West (1975) and West and Farrington (1977). These analyses were carried out in the CSDD, which is a prospective longitudinal study of 411 London males, mostly born in 1953 and followed up from age 8; this project is described in more detail later. These analyses were based on convictions of the Study males, their biological parents and their biological siblings up to December 31, 1973, when the Study males were aged 20 on average. Brothers and sisters who had not reached age 17 by this date (the minimum age for adult court at that time) were not included in the analyses.

Out of 1763 persons searched in 394 families, 397 (22.5%) had been convicted; 28.2% of Study males, 26.7% of fathers, 13.4% of mothers, 37.4% of brothers and 7.6% of sisters. This was an average of one convicted person out of 4.5 persons per family. There were a total of 1217 convictions, or an average of 3.1 per family. Importantly, only 18 families (4.6%) accounted for nearly half (47.7%) of all the convictions, and 45 families (11.4%) accounted for nearly half (47.1%) of all the convicted persons.

These analyses were repeated by Farrington, Barnes and Lambert (1996) for convictions up to December 31, 1993, when the Study males were aged 40 on average. Out of 2203 persons searched in 397 families, 601 (27.3%) had been convicted; 39.0% of Study males, 27.9% of fathers, 13.6% of mothers, 44.2% of brothers and 12.1% of sisters. This was an average of 1.5 convicted persons out

of 5.5 persons per family. There were 2442 convictions, or an average of 6.2 per family. Importantly, only 20 families (5.0%) accounted for nearly half (46.4%) of all convictions, and 48 families (12.1%) accounted for nearly half (44.3%) of all convicted persons.

The main aim of the present chapter is to repeat these analyses for two generations of CSDD families. In the interests of clarity, the original 411 males are termed generation 2 (G2), their biological parents are termed generation 1 (G1) and their biological children are termed generation 3 (G3). We aim to investigate to what extent the previous results, obtained by comparing G1 parents with G2 children, are replicated when G2 parents are compared with G3 children.

Method

The CSDD is a prospective longitudinal survey of 411 London males (G2 males) from age eight to age 56. The results of the Study have been described in six books (Farrington, Piquero, & Jennings, 2013; Piquero et al., 2007; West, 1969, 1982; West & Farrington, 1973, 1977), and in five summary articles (Farrington, 1995, 2003; Farrington, Coid, & West, 2009; Farrington & West, 1981, 1990). The original sample of G2 males is described next. Since the analyses are based on criminal record searches of all three generations, these are also described. As the record searches were based on identifying particulars obtained in interviews, these interviews are described as well.

The sample of G2 males

At the time they were first contacted in 1961–62, the G2 males were all living in a working-class area of South London. The vast majority of 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 which had been established. In addition to 399 boys from these six schools, 12 boys from a local school for educationally subnormal children were included in the sample, in an attempt to make it more representative of the population of boys living in the area. Therefore, the boys were not a probability sample drawn from a population, but rather a complete population of boys of that age in that area at that time.

Most of the G2 boys (357, or 87%) were Caucasian in appearance and of British origin, in the sense that they were being brought up by parents who had themselves been brought up in England, Scotland or Wales. Of the remaining 54 boys, 12 were Afro-Caribbean, having at least one parent of West Indian (usually) or African origin. Of the remaining 42 boys of non-British origin, 14 had at least one parent from the North or South of Ireland, 12 had parents from Cyprus, and the other 16 boys were Caucasian and had at least one parent from another Western industrialized country.

On the basis of their fathers' occupations when they were aged eight, 94% of the G2 boys could be described as working-class (categories III, IV or V on the

Registrar General's scale, describing skilled, semi-skilled or unskilled manual workers), in comparison with the national figure of 78% at that time. The majority of the boys were living in conventional two-parent families with both a father and a mother figure; at age 8–9, only 6% of the boys had no operative father and only 1% had no operative mother. This was, therefore, overwhelmingly a traditional Caucasian, urban, working-class sample of British origin.

Interviews with the G2 males

The G2 males have been interviewed nine times, at ages eight, ten, 14, 16, 18, 21, 25, 32 and 48. At ages eight, ten and 14, they were assessed in their schools. The tests in schools measured individual characteristics such as intelligence, attainment, personality and psychomotor impulsivity. At all ages except 21 and 25, the aim was to interview all the G2 males who were still alive, and it was always possible to interview a high proportion: 405 (99%) at age 14, 399 (97%) at age 16, 389 (95%) at age 18, 378 (94%) at age 32 and 365 (93%) at age 48. The survey received ethical approval from the Ethics Committee of the Institute of Psychiatry, Kings College London. At age 48, 17 males had died, five could not be traced and 24 refused, which meant that 365 out of 394 who were still alive were interviewed. Because of inadequate funding, only about half of the males were interviewed at age 21, and about a quarter at age 25.

In addition, the boys' teachers completed questionnaires when the G2 males were aged about 8, 10, 12 and 14. These furnished data about their troublesome and aggressive school behaviour, their restlessness or poor concentration, 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.

Interviews with the G1 parents

Interviews with the G1 parents were carried out by female social workers who visited their homes. These took place about once a year from when the G2 boy was about eight 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 G1 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.

Interviews with the G2 wives and female partners

Information about the wives and female partners (cohabitees) of the G2 males was sought during all interviews from age 18 onwards. For convenience, the G2 wives and female partners will simply be referred to as the G2 wives. They filled in a child-rearing questionnaire when the G2 male was aged 32, and 234 G2

wives (77.2% of 303) were interviewed when the G2 male was aged 48. This interview included information about child-rearing, health and family violence (see Theobald & Farrington, 2012).

Interviews with the G3 children

Only biological G3 children aged at least 18 (born up to 1995) were targeted. We knew about and had identifying information for 691 G3 children. In order to meet the ethical standards of the South-East Region Medical Ethics Committee, we were required to contact the G2 male and/or his female partner in trying to interview the G3 children. Therefore, 20 G3 children whose G2 fathers refused at age 48, and seven children whose father was dead at age 48 (and where no female partner was available) were not eligible to be interviewed. An additional six G3 males who had died and three who were disabled (one Down's syndrome, one mental health problems, one severe attention deficit-hyperactivity disorder), together with two who did not know that the G2 male was their father, were considered to be not eligible.

Of the 653 eligible G3 children, 551 were interviewed (84.4%) at an average age of 25; 291 of the 343 G3 males (84.8%) and 260 of the 310 G3 females (83.9%). Of the remainder, 39 children refused, 33 parents refused, 13 children could not be traced, 14 were elusive (agreeing or not refusing but never being available to interview) and three were aggressive or problematic. Of the 29 eligible children living abroad since birth, 17 were interviewed, usually by telephone. (For more information, see Farrington, Ttofi, Crago, & Coid, 2015.) Big efforts were made to establish which G2 wife was the mother of which G3 child.

Criminal record searches of the G2 males

Up to 1994, searches were carried out in the central Criminal Record Office or National Identification Service (CRO/NIS) at Scotland Yard in London to try to locate findings of guilt of the G2 males and their biological 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. Two males were counted as not at risk of conviction, because they emigrated permanently before age 10, were not convicted and were not searched abroad.

Between 1964 and 1979, paper records were consulted in the CRO/NIS at Scotland Yard. In 1979, the records were transferred on to microfiche, and microfiche records were then consulted in the CRO/NIS at Scotland Yard until 1994. However, from 1995, the microfiche collection was discontinued and all convictions 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 last search of conviction records in the CRO/NIS took place towards the end of 1994, when most of the G2 males were aged 41. Convictions were counted for offences committed up to the end of 1993, when most of the males were aged 40 (Farrington et al., 1996; Farrington, Lambert, & West, 1998). The recorded age of offending is defined here as 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.

Further searches of criminal records of the G2 males took place in July 2002 and December 2004 in the PNC, at which time most of the males were aged 51. 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. A Home Office report (Farrington et al., 2006) and many previous analyses were based on the criminal records up to age 50 derived from these searches. A further search of the PNC was completed in March 2011, when most males were aged 57. The criminal records of the G2 males are therefore now known up to age 56 (Farrington et al., 2013).

For comparability with the G3 children, 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 total, 177 G2 males were convicted up to age 56 (43.8% of 404 at risk) for a total of 909 offences, including 51 cautions. In this chapter, "convictions" include officially recorded cautions. Convictions were only counted if they were for "standard list" (more serious) offences, thereby excluding minor crimes such as minor 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. The definition of what is a "standard list" offence changed over time. In particular, common assault became a standard list offence in July 1995, drunk driving was added to the standard list from January 1996, and being drunk and disorderly was added in April 1997. All of these types of offences were counted (see Farrington, Ttofi, Crago, & Coid, 2014).

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 therefore 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 909 recorded offences up to age 56 corresponded to 826 separate occasions of conviction. Offences “taken into consideration” were not counted.

The paper and microfiche records were extremely detailed (e.g. in their descriptions of the circumstances of offences) but the computerized PNC records (actually the Home Office/Ministry of Justice extract from the PNC) are not. There were major problems in deciding whether a G2 male found in a search was really our 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 PNC and our own records. Fortunately, it was possible to establish whether each G2 male in the PNC data was our man unambiguously in all cases, using our prior searches, interview information and knowledge about the man’s age and address (compared with his places of arrest and conviction, which were listed in the PNC file). In many cases, the G2 male and/or the G2 wife provided information about convictions in interviews. It would have been difficult to establish with certainty who was or was not our person in the PNC data in the absence of the interview data.

Criminal record searches of the G2 wives

We knew about and had identifying information for 413 wives of the G2 males. Theobald and Farrington (2010) studied the effect of getting married on convictions of the G2 wives. They were searched in the CRO/NIS in 1994, and in the PNC in 2004 and 2011. Of these 413 wives, 55 were convicted (13.3%), with a total of 129 offences. The counting rules were similar for all relatives (e.g. only convictions on different days were counted) except that cautions up to 1994 were only counted for G2 males.

Criminal record searches of the G2 brothers and G2 sisters

The full biological brothers and sisters of the G2 males were also searched from 1964 to 2011. Farrington and Painter (2004) reported on their convictions and compared G2 brothers, G2 sisters and G2 males; Besemer (2012) investigated intergenerational transmission from G1 parents to all G2 sons and G2 daughters.

The sample of 411 G2 males contained 14 pairs of brothers. In the interests of studying the 397 families, one G2 male from each pair (each younger brother and one randomly selected member of each of the five twin pairs) was counted as a G2 brother instead of a G2 male. Only family members who survived at least to age ten, and who had sufficient identifying particulars (name and date of birth), were searched. Because of our extensive contacts with the families over many years, very few family members had insufficient identifying particulars.

Up to 2011, when the average G2 brother was aged 56, 214 out of 489 G2 brothers (43.8%) were convicted, with a total of 1078 offences. Similarly, up to 2011, when the average G2 sister was aged 56, 68 out of 525 G2 sisters (13.0%) were convicted, with a total of 190 offences.

Criminal record searches of the G1 fathers and G1 mothers

The G1 fathers and G1 mothers were repeatedly searched in the CRO/NIS between 1964 and 1994, when the average G1 father (neglecting deaths) would have been 72 and the average G1 mother would have been 69. Up to this time, 110 G1 fathers (27.9% out of 394 known) were convicted, with a total of 318 offences, and 54 G1 mothers (13.6% out of 397) were convicted, with a total of 258 offences.

Criminal record searches of the G3 children

As mentioned, there were 691 children whose name and date of birth were known. Their median year of birth was 1981, and more than half were born between 1977 and 1985. They were first searched in the microfiche records in 1994, and they were then searched in the PNC in 2003, 2006 and 2011–12. The 31 G3 children who had been abroad since birth could not be searched, but 656 of the remaining 660 were searched. These included 343 G3 males and 313 G3 females. The mean age at which they were last searched was 29, and more than half were last searched between ages 25 and 33. Of the 343 G3 males, 95 (27.7%) were convicted, with a total of 537 offences, and 27 of the 313 G3 females (8.6%) were convicted, with a total of 53 offences. In the present analyses, only G3 children who had been searched after age 21 were included; their mean age searched was 30. In the interests of having comparable conviction data on all relatives, only convictions up to 32 are counted in this chapter. This age was chosen because 93.8% of the G2 males were interviewed at age 32, and it was close to the mean age of searching of the G3 males.

Statistical methods

The main measure of strength of relationship that is used in this chapter is the Odds Ratio (OR). This statistic has the advantage that it is not dependent on the overall sample size (unlike chi-squared for example) or on the row and column totals (Fleiss, 1981). Conventionally, its confidence interval (CI) is given, and it is statistically significant on a two-tailed test when the lower CI is 1.00 or greater. One-tailed tests would be justifiable in light of the directional predictions. Again conventionally, an OR of 2.00 or greater is considered to indicate a strong relationship (Cohen, 1996).

Because the G3 children are not all independent, it is necessary to adjust the variance of the OR in G3 analyses to take account of the clustering of G3 children in G2 families. It is easiest to do this by referring to the standardized mean difference d . Clustering has no material effect on the value of d but it increases the variance of d (see e.g. Hedges & Hedberg, 2007). The variance is multiplied by $[1 + (n-1) \times ICC]$, where n is the number of individuals in a cluster and ICC is the intraclass correlation. This correction has been known for many years and has been called the design effect (e.g. Kish, 1965) or the variance inflation factor (e.g. Donner, Birkett, & Buck, 1981).

It is well known (see e.g. Lipsey & Wilson, 2001, p. 202) that

$$\ln(\text{OR}) = \pi \times d / \sqrt{3}$$

$$\text{or } \ln(\text{OR}) = 1.81 \times d$$

$$\text{Therefore, SE } [\ln(\text{OR})] = 1.81 \times \text{SE}(d)$$

Since SE $[\ln(\text{OR})]$ increases in direct proportion to SE(d), it follows that the variance of $\ln(\text{OR})$, like the variance of d, needs to be multiplied by $[1 + (n-1) \times \text{ICC}]$ to take account of clustering.

For the dichotomized measure of convictions of G3 males, the ICC was 0.31, indicating a considerable degree of clustering of convictions in families. Since there were 275 G3 males in 186 families, the average number of G3 males in a family was 1.48. Therefore, the variance of $\ln(\text{OR})$ was multiplied by $[1 + 0.48 \times 0.31]$, or increased by 15%, to take account of the clustering of convictions. This is equivalent to increasing the standard error of $\ln(\text{OR})$ by 7.2% for G3 males. For G3 females, the ICC was only 0.027, corresponding to an increase in the variance of $\ln(\text{OR})$ of only 1.3%. Because this was very small, the standard error of $\ln(\text{OR})$ was not increased for G3 females.

It is not necessary to adjust the OR in analyses of G2 males because there is only one G2 male per family.

Results

G1-G2 families

There were 397 families in the CSDD. However, three G1 fathers were not searched because of insufficient identifying particulars, and two G2 males moved abroad before the age of criminal responsibility of ten and so were not at risk of being convicted in England and Wales. This left 392 families with a G1 father, a G1 mother and a G2 male who were all searched and at risk of conviction. There were 485 G2 brothers and 525 G2 sisters in these families who were searched and at risk of conviction, after excluding those who died or emigrated before age ten.

Table 1.1 shows the prevalence of convictions up to age 32 for all G1-G2 family members; 38.5% of G2 males were convicted, compared with 19.6% of G1 fathers, 7.1% of G1 mothers, 41.2% of G2 brothers and 11.8% of G2 sisters. The fact that the percentage of G2 brothers who were convicted is similar to the percentage of G2 males who were convicted suggests that the repeated personal contacts with the G2 males had very little effect on their likelihood of being convicted. In total, 518 out of 2186 birth family members (G1 fathers, G1 mothers, G2 males, G2 brothers and G2 sisters), or 23.7%, were convicted, and they accumulated 1934 convictions, an average of nearly one each. In addition, Table 1.1 shows that 8.7% of G2 wives (including female partners) were convicted up to

Table 1.1 Prevalence of convictions up to age 32 among all family members (G1-G2)

Relative	Number searched	Number convicted	% convicted	Number convictions	Convictions per offender
G2 Male	392	151	38.5	696	4.6
G1 Father	392	77	19.6	183	2.4
G1 Mother	392	28	7.1	49	1.8
G1 Parent	784	105	13.4	232	2.2
G2 Older brother	227	104	45.8	443	4.3
G2 Younger brother	258	96	37.2	397	4.1
G2 Brother	485	200	41.2	840	4.2
G2 Older sister	243	29	11.9	92	3.2
G2 Younger sister	282	33	11.7	74	2.2
G2 Sister	525	62	11.8	166	2.7
G1-G2 Family member	2186	518	23.7	1934	3.7
G2 Wife	391	34	8.7	72	2.1

age 32. The number of convictions per offender was 4.6 for G2 males, 4.2 for G2 brothers, 2.4 for G1 fathers, 1.8 for G1 mothers, 2.7 for G2 sisters and 2.1 for G2 wives.

Table 1.2 shows the concentration of convictions in G1-G2 families. For example, eight families (2.0% of all families), containing 80 persons (G1 fathers, G1 mothers, G2 males, G2 brothers and G2 sisters), or 3.6% of all persons, accounted for 489 convictions (about a quarter of all convictions). Twenty-five families (6.4% of all families), containing 233 persons (10.7% of all persons),

Table 1.2 The concentration of convictions up to age 32 in families (G1-G2)

Families		Persons		Convictions	
No.	%	No.	%	No.	%
4	1.0	38	1.7	307	15.9
8	2.0	80	3.6	489	25.3
12	3.1	115	5.3	625	32.3
16	4.1	147	6.7	738	38.2
20	5.1	186	8.5	840	43.4
25	6.4	233	10.7	954	49.3
30	7.6	261	11.9	1054	54.5
35	8.9	292	13.4	1137	58.8
40	10.2	332	15.2	1207	62.4
50	12.8	401	18.3	1321	68.3
60	15.3	462	21.1	1417	73.3
70	17.9	546	25.0	1494	77.2
100	25.5	756	34.6	1674	86.6
150	38.3	1025	46.9	1832	94.7
200	51.0	1294	59.2	1903	98.4
300	76.5	1833	83.9	1934	100.0
392	100.0	2186	100.0	1934	100.0

accounted for 954 convictions (about half of all convictions). Only 161 families (41.1%) contained no convicted persons.

Table 1.3 shows the percentage of G2 males who were convicted up to age 32, given convicted or unconvicted relatives up to age 32. For example, 68.8% of G2 males with a convicted G1 father were themselves convicted, compared with 31.1% of G2 males with an unconvicted G1 father. Similarly, 64.3% of G2 males with a convicted G1 mother were themselves convicted, compared with 36.5% of G2 males with an unconvicted G1 mother. The figures in Table 1.3 are based on G2 males, whereas those in Table 1.1 are based on relatives. For example, 122 G2 males had at least one convicted G2 brother in Table 1.3, whereas 200 G2 brothers were convicted in Table 1.1; and 120 G2 males had only unconvicted G2 brothers in Table 1.3, whereas 285 G2 brothers were unconvicted in Table 1.1.

The strongest relationship in Table 1.3 was between G2 males and G2 wives; 78.8% of G2 males with a convicted wife were themselves convicted, compared with 35.1% of G2 males with an unconvicted wife. The relationship between convictions of husbands and wives was even stronger in G1; 71.4% of G1 fathers with a convicted G1 mother were themselves convicted, compared with 15.7% of G1 fathers with an unconvicted G1 mother (OR=13.47, CI=5.66–32.05).

Following Thornberry, Freeman-Gallant and Lovegrove (2009), it might be expected that the relationship between a convicted parent and a convicted child would be less strong if the child was separated (permanently or temporarily) from the parent, and this was indeed found. Of the 392 G2 males, 254 (64.8%) were not separated from their G1 father up to age ten, 64 (16.3%) were separated because of death or hospitalization, and 74 (18.9%) were separated because of other reasons, usually connected with parental conflict.

Of G2 males who were not separated, 66.7% of 33 with a convicted G1 father were themselves convicted, compared with 27.6% of 221 with an unconvicted G1 father (OR=5.25, CI=2.40–11.46). Of G2 males who were separated because of death or hospitalization, 66.7% of 12 with a convicted G1 father were themselves

Table 1.3 Percentage of G2 males convicted up to age 32, given convicted or unconvicted relatives up to age 32 (G1–G2)

Relative	Convicted relative (N)	Unconvicted relative (N)	Odds ratio	CI
G1 Father	68.8 (77)	31.1 (315)	4.89	(2.86–8.37)
G1 Mother	64.3 (28)	36.5 (364)	3.13	(1.40–6.97)
G1 Parent	65.9 (85)	30.9 (307)	4.31	(2.59–7.17)
G2 Older brother	65.8 (79)	29.2 (72)	4.68	(2.35–9.31)
G2 Younger brother	57.1 (70)	27.1 (85)	3.59	(1.83–7.05)
G2 Brother	57.4 (122)	27.5 (120)	3.55	(2.07–6.08)
G2 Older sister	71.4 (21)	39.6 (149)	3.81	(1.40–10.39)
G2 Younger sister	61.5 (26)	43.0 (151)	2.12	(0.90–4.97)
G2 Sister	62.8 (43)	37.7 (239)	2.79	(1.43–5.47)
G2 Wife/Partner	78.8 (33)	35.1 (285)	6.87	(2.88–16.39)

convicted, compared with 32.7% of 52 with an unconvicted G1 father (OR=4.12, CI=1.09–15.61). Of G2 males who were separated for other reasons, 71.9% of 32 with a convicted G1 father were themselves convicted, compared with 47.6% of 42 with an unconvicted G1 father (OR=2.81, CI=1.06–7.49).

Table 1.4 shows the relationship between convicted G1 parents and convicted G2 brothers and G2 sisters. For example, 71.9% of families with a convicted G1 father also had a convicted G2 brother, compared with 43.8% of families with an unconvicted G1 father; and 39.1% of families with a convicted G1 mother also had a convicted G2 sister, compared with 13.1% of families with an unconvicted G1 mother. It is noteworthy that the relationship between G1 fathers and G2 brothers was stronger than between G1 fathers and G2 sisters; and that the relationship between G1 mothers and G2 sisters was stronger than between G1 mothers and G2 brothers.

G2–G3 families

There were 254 G2–G3 families with a G2 male, a G2 wife and at least one G3 child searched and at risk of conviction. Nine G2 males had two G2 wives and therefore were included in two G2–G3 families. As a consequence, the 254 G2–G3 families included 245 different G2 males.

Table 1.5 shows the prevalence of convictions up to age 32 of all G2–G3 family members; 41.2% of the different G2 males were convicted, compared with 10.2% of G2 wives, 31.3% of G3 sons and 8.7% of G3 daughters. In total, 235 out of 1028 different birth family members (22.9%) were convicted, and they accumulated 1054 convictions, or about one each. The number of convictions per offender was 4.7 for G2 males, 1.9 for G2 wives, 5.6 for G3 sons and 2.0 for G3 daughters.

Table 1.5 also shows the convictions of the G1 grandfathers and G1 grandmothers of the G3 children; there were some duplicates, but 23.7% of different G1 grandfathers and 8.9% of different G1 grandmothers of these families were convicted.

Table 1.4 Percentage of families with a G2 brother or G2 sister convicted up to age 32, given a convicted or unconvicted G1 parent up to age 32 (G1–G2)

	Convicted G1 father	Unconvicted G1 father	Odds ratio	CI
% with G2 Brother convicted (N)	71.9 (57)	43.8 (185)	3.29	(1.72–6.28)
% with G2 Sister convicted (N)	25.8 (62)	12.3 (220)	2.49	(1.24–4.99)
	Convicted G1 mother	Unconvicted G1 mother	Odds ratio	CI
% with G2 Brother convicted (N)	76.5 (17)	48.4 (225)	3.46	(1.09–10.93)
% with G2 Sister convicted (N)	39.1 (23)	13.1 (259)	4.25	(1.71–10.59)

Table 1.5 Prevalence of convictions up to age 32 among all relatives (G2-G3)

Relative	Number searched	Number convicted	% convicted	Number convictions	Convictions per offender
G2 Male	254 (*245)	105 (*101)	41.3 (*41.2)	498 (*477)	4.7 (*4.7)
G2 Wife	254	26	10.2	50	1.9
G2 Parent	508 (*499)	131 (*127)	25.8 (*25.5)	548 (*527)	4.2 (*4.1)
G3 Sons	275	86	31.3	483	5.6
G3 Daughters	254	22	8.7	44	2.0
G3 Children	529	108	20.4	527	4.9
G2-G3 Family member	1037 (*1028)	239 (*235)	23.0 (*22.9)	1075 (*1054)	4.5 (*4.5)
G1 Grandfather	252 (*245)	60 (*58)	23.8 (*23.7)	146 (*143)	2.4 (*2.5)
G1 Grandmother	254 (*247)	23 (*22)	9.1 (*8.9)	45 (*42)	2.0 (*1.9)

Notes

* excluding nine G2 male duplicates (4 convicted, with 21 convictions), *excluding seven G1 grandfather and G1 grandmother duplicates (2 grandfathers convicted, with 3 convictions, 1 grandmother convicted, with 3 convictions).

Table 1.6 shows the concentration of convictions in the G2-G3 families. For example, six families (2.4% of all families), containing 32 persons (G2 male, G2 wife, G3 sons, G3 daughters), or 3.1% of all persons, accounted for 244 convictions (almost a quarter of all convictions). Twenty families (7.9% of all families), containing 91 persons (8.8% of all persons), accounted for 532 convictions (about half of all convictions). Only 112 families (44.1%) contained no convicted persons.

Table 1.6 The concentration of convictions up to age 32 in families (G2-G3)

Families		Persons		Convictions	
No.	%	No.	%	No.	%
3	1.2	14	1.4	155	14.4
6	2.4	32	3.1	244	22.7
9	3.5	48	4.6	313	29.1
12	4.7	59	5.7	378	35.2
15	5.9	69	6.7	441	41.0
20	7.9	91	8.8	532	49.5
25	9.8	109	10.5	611	56.8
30	11.8	128	12.3	677	63.0
35	13.8	148	14.3	735	68.4
40	15.7	168	16.2	781	72.7
50	19.7	210	20.3	855	79.5
60	23.6	250	24.1	911	84.7
70	27.6	292	28.2	953	88.7
100	39.4	414	39.9	1032	96.0
150	59.1	631	60.8	1075	100.0
254	100.0	1037	100.0	1075	100.0

Table 1.7 shows the percentage of G3 sons who were convicted up to age 32, given convicted or unconvicted relatives up to age 32. For example, 39.7% of G3 sons with a convicted G1 grandfather were themselves convicted, compared with 29.2% of G3 sons with an unconvicted G1 grandfather. However, convictions of G1 grandfathers and G1 grandmothers did not significantly predict convictions of G3 sons. Convictions of G2 males, G2 wives, G3 brothers and G3 sisters did significantly predict convictions of G3 sons. The comparison between G3 sons and their G3 siblings was based on families; for example, 59 G3 sons had at least one convicted brother, 107 G3 sons had only unconvicted brothers, and the remaining 109 G3 sons had no brothers. Therefore, it was not necessary to adjust these analyses for non-independence.

Table 1.8 shows the percentage of G3 daughters who were convicted up to age 32, given convicted or unconvicted relatives up to age 32. For example, 17.2% of G3 daughters with a convicted G1 grandfather were themselves convicted, compared with 5.9% of G3 daughters with an unconvicted G1 grandfather. Convictions of G1 grandfathers, G2 wives and G3 brothers significantly predicted convictions of G3 daughters, but convictions of G1 grandmothers, G2 males and G3 sisters were not significantly predictive.

Table 1.7 Percentage of G3 sons convicted up to age 32, given convicted or unconvicted relatives up to age 32 (G2-G3)

Relative	Convicted relative (N)	Unconvicted relative (N)	Odds ratio	CI
G1 Grandfather	39.7 (58)	29.2 (216)	1.60	(0.84-3.05)
G1 Grandmother	40.0 (25)	30.4 (250)	1.53	(0.62-3.78)
G2 Male	47.7 (109)	20.5 (166)	3.54	(2.00-6.26)
G2 Wife	67.9 (28)	27.1 (247)	5.67	(2.30-13.97)
G3 Brother	52.5 (59)	19.6 (107)	4.53	(2.25-9.12)
G3 Sister	66.7 (15)	27.1 (129)	5.37	(1.72-16.82)

Note

The CI for G1 grandfather, G1 grandmother, G2 male and G2 wife was increased to take account of the non-independence of G3 sons (see text).

Table 1.8 Percentage of G3 daughters convicted up to age 32, given convicted or unconvicted relatives up to age 32 (G2-G3)

Relative	Convicted relative (N)	Unconvicted relative (N)	Odds ratio	CI
G1 Grandfather	17.2 (64)	5.9 (187)	3.32	(1.36-8.09)
G1 Grandmother	17.4 (23)	7.8 (231)	2.49	(0.77-8.11)
G2 Male	10.9 (110)	6.9 (144)	1.64	(0.68-3.95)
G2 Wife	19.4 (36)	6.9 (218)	3.27	(1.23-8.69)
G3 Brother	16.4 (55)	3.1 (97)	6.13	(1.58-23.73)
G3 Sister	10.0 (20)	9.2 (131)	1.10	(0.23-5.33)

We again investigated whether the relationship between a convicted parent and a convicted child was less strong if the child was separated (permanently or temporarily) from the parent, and indeed this was true for G3 sons. Of the 275 G3 sons, 46 were not interviewed; of the remainder, 176 (76.9%) were not separated from their father before age 16, but 53 (23.1%) were. Of G3 sons who were not separated, 41.4% of 58 with a convicted G2 father were themselves convicted, compared with 16.9% of 118 with an unconvicted G2 father (OR=3.46, CI=1.70–7.04). Of G3 sons who were separated, 55.6% of 27 with a convicted G2 father were themselves convicted, compared with 30.8% of 26 with an unconvicted G2 father (OR=2.81, CI=0.91–8.68).

As mentioned, convictions of G2 fathers did not significantly predict convictions of G3 daughters, and this relationship was not stronger for G3 daughters who had not been separated; OR=0.89 (CI=0.22–3.59) for unseparated G3 daughters, and OR=1.18 (CI=0.26–5.47) for separated G3 daughters.

Conclusions

Compared with the previous article by Farrington et al. (1996), in this chapter convictions are studied up to the same age (32) for all relatives. However, one limitation of the present analysis is that the criminal records of the G3 children up to age 32 are not complete. Quite a few of the G3 children were last searched before age 32: 67.3% of G3 sons and 64.2% of G3 daughters. Nevertheless, the majority (65.1% of G3 sons and 70.1% of G3 daughters) were aged at least 28 when they were last searched, and so they were well past the peak age for first convictions. Another difference from the previous article is that the present chapter includes G2 wives and female partners, whereas in the previous article only G2 wives were included. The previous article showed that very little of the concentration of offending in families was attributable to co-offending.

Our main conclusions are that offending is strongly concentrated in families as well as in individuals and that it is transmitted from one generation to the next. However, the concentration of offending was somewhat less in the G2–G3 analysis than in the G1–G2 analysis. While 6% of G1–G2 families accounted for half of all their convictions, 8% of G2–G3 families accounted for half of all their convictions. This was mainly because the average family size decreased from G2 (5.6 persons per family) to G3 (4.1 persons per family), and because variations in family size were less for G3. In G2, the 25 most criminal families (6.4% of families) contained 233 persons (an average of 9.3 each; 10.7% of all persons); in G3, the 20 most criminal families (7.9% of families) contained 91 persons (an average of 4.6 each; 8.8% of all persons).

While the concentration of offending was clearly less in the G2–G3 analysis, the strength of intergenerational transmission was not clearly lower. The OR was 4.89 for G1 fathers versus G2 males, 3.29 for G1 fathers versus G2 brothers, and 3.54 for G2 males versus G3 sons. The OR was 3.13 for G1 mothers versus G2 males, 3.46 for G1 mothers versus G2 brothers and 5.67 for G2 wives versus G3

sons. Perhaps surprisingly, there was only one significant relationship between G1 grandparents and G3 children: convicted G1 grandfathers predicted convicted G3 daughters.

In the G1–G2 analysis, same-sex intergenerational relationships were generally stronger than opposite-sex relationships. The G1 father–G2 male relationship was stronger than the G1 mother–G2 male relationship; the G1 father–G2 brother relationship was stronger than the G1 father–G2 sister relationship; and the G1 mother–G2 sister relationship was stronger than the G1 mother–G2 brother relationship. Rowe and Farrington (1997) also found in the CSDD that intergenerational and intragenerational same-sex relationships were stronger than the corresponding opposite-sex relationships.

The greater strength of same-sex intergenerational relationships was less clear in the G2–G3 analysis. While the G2 wife–G3 daughter relationship was stronger than the G2 male–G3 daughter relationship, the G2 wife–G3 son relationship was stronger than the G2 male–G3 son relationship. Also, as already noted, the only significant relationship between G1 and G3 was between G1 grandfathers and G3 daughters.

It is not possible to study the importance of genetic influences in the CSDD because no genetic material (e.g. DNA) has been collected. However, it is possible to study the importance of environmental influences by comparing children who have been separated from their parents with children who have not. To the extent that genetics is important, separated and unseparated children should be similar. However, in the G1–G2 analysis, the relationship between convicted G1 fathers and convicted G2 males was clearly stronger for G2 males who had not been separated from their G1 fathers. Furthermore, this result was replicated in the G2–G3 analysis in comparing G2 males with their G3 sons. Therefore, environmental influences are important.

The main implications of this chapter for policy and practice are that interventions should be targeted on criminal families rather than on individuals and should particularly aim to interrupt the intergenerational transmission of offending. Successful interventions would have greater and longer-lasting benefits by reducing the offending not only of one generation but also of succeeding generations.

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