

Gang Membership and Teenage Offending

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The Edinburgh Study of Youth Transitions and Crime**

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KEY FINDINGS

About 20 per cent of young people said they belonged to a gang at the age of 13, falling to 5 per cent by the age of 17. However, membership of 'hard core' gangs, defined as having a well-defined subversive identity expressed through a specific name and sign or saying, remained level over these years. Gangs were fairly large: when cohort members were aged 17, half of them consisted of 20 or more people.

Gang membership was rather more common in children from less affluent families and in those not living with both parents, but more striking was the much higher level of gang membership in deprived neighbourhoods. This shows that the social and ecological context is more important than the characteristics of the individual family.

Just as high a proportion of girls as boys were members of gangs at the age of 13, but thereafter gang membership fell much more rapidly in girls than boys.

Rates of delinquency and substance use were much higher in gang members than others throughout the years from 13 to 17, and this applied both to girls and to boys.

The same individuals committed more offences during periods when they were gang members than during other periods. This shows that the link between delinquency and gang membership is independent of the characteristics of the individuals who join gangs.

Gang membership has a strong statistical effect on delinquency when holding constant the effects of a range of other factors.

The broader context of these findings is that much youth offending is a group activity. However, the study also shows that between the ages of 13 and 17 young people in Edinburgh tended to grow out of the need to identify with a gang while at the same time their offending tended to reduce.

INTRODUCTION

The purpose of this paper is to explore the influence of gang membership on teenage offending and substance use (alcohol, cigarettes, and illicit drugs). It draws on findings from the Edinburgh Study of Youth Transitions and Crime ('the Edinburgh Study'), a longitudinal research programme exploring pathways into and out of offending for a cohort of around 4,300 young people who started secondary school in the City of Edinburgh in 1998. The key aims and methods of the study are summarized below.¹

Aims of the programme

- To investigate the factors leading to involvement in offending and desistance from it
- To examine the striking contrast between males and females in criminal offending
- To explore the above in three contexts:
 - Individual development
 - Interactions with formal agencies of control
 - The social and physical structures of neighbourhoods
- To develop new theories explaining offending behaviour and contribute to practical policies targeting young people

Overview of methods

- Self report questionnaires (annual sweeps)
- Semi-structured interviews (40 undertaken in sweep 2)
- School, social work, children's hearings records (annual sweeps)
- Teacher questionnaires (1999)
- Police juvenile liaison officer and Scottish criminal records (from 2002)
- Parent survey (2001)
- Geographic information system

Participating schools

- All 23 state secondary schools
- 8 out of 14 independent sector schools
- 9 out of 12 special schools

Response Rates

- Sweep 1 - 96.2% (n=4,300)
- Sweep 2 - 95.6% (n=4229)
- Sweep 3 - 95.2% (n=4296)
- Sweep 4 - 92.6% (n=4144)
- Sweep 5 - 89.1% (n=3856)
- Sweep 6 - 80.5% (n=3525)

Research Team

- David Smith, Lesley McAra
- Susan McVie, Lucy Holmes, Jackie Palmer, Paul Bradshaw (left 2003)

Study Funding

- Economic and Social Research Council (1998 - 2002)
- The Scottish Executive (2002- 2005)
- The Nuffield Foundation (2002 - 2006)

¹ See also Smith et al (2001) and Smith and McVie (2003) for further details of the Study.

Context

Over the past 20 years there have been very few studies of youth gangs in Britain, although there were a few much earlier studies such as one by David Downes (1966) of teenage gangs in London and another by James Patrick (1973) of 'knife gangs' in Glasgow. On the whole, crime and criminal justice professionals in the UK have maintained that gangs on the pattern of those in the US do not exist in Britain, and that little crime is related to gang activity here. However, there has been some change in prevailing opinion over the past ten years as the police have highlighted the organized element in football violence, the drugs trade, and trafficking in women for prostitution (Davidson 1998; Gardner 1999a, b; Lyst 2000). Specifically, the rising use of firearms has often been linked by the police to growing gang activity. These examples immediately show that what is meant by 'gangs' can range from groups of teenagers hanging about aimlessly to violent and ruthless units of criminal organizations. In response to changing perceptions, a number of gang resistance programmes have emerged, such as the Manchester Multi-Agency Gang Strategy, developed by Manchester City Council in cooperation with Greater Manchester Police and a range of other partners.²

In the US there is a longer and fuller history of gang research, stretching back to Ashbury (1928) and Thrasher (1936) and continuing to the present day. Although most of this research has been observational or ethnographic, there have also been several recent examples of large-scale survey research offering accurate and detailed assessments of the characteristics of gang members and the influence of gang membership on delinquency. Some notable examples are the Seattle Social Development Project (Battin *et al* 1998), the Denver Youth Study (Esbensen and Huizinga 1993), and the Rochester Youth Development Study (Thornberry *et al* 1993; Thornberry *et al* 1994; Thornberry 1998). Furthermore, some significant large-scale quantitative research on gangs has also been carried out using data from the National Evaluation of the Gang Resistance Education and Training (GREAT) program (Esbensen and Osgood 1997; Esbensen *et al* 2001).

The volumes of American gang research have produced three broad conclusions relevant to this paper: first that gang members are distinguishable in many respects from non-gang members (see panel overleaf); second, that gangs in North America more often than not, bear little resemblance to the 'gangsta-rap' image attributed to them by American popular culture and by the international news media; and third, that irrespective of historical period, research methodology, study design and sample, gang members commit more crime than non-members (Howell 1997). Perhaps the strongest evidence on this last point comes from the study by Esbensen and Huizinga (1993) which showed that the same individuals committed more crime during periods of gang membership than at times when they were not gang members.

Various learning theories have been used to explain the influence of gang membership on criminal offending. Among these, the most influential has been Sutherland's theory of differential association (Sutherland 1947). In that theory, the emphasis is on learning 'definitions' - broadly, ways of engaging with and understanding the social world - from associates. Modern theories, such as those of Akers *et al* (1979) and

² For further details, see www.manchester.gov.uk/mmags/

Bandura (1973; 1991) make clearer distinctions between learning behaviour and values, between forming an image of the self and of others, and between learning by doing or participating as opposed to observing the behaviour of others. According to social learning theory, the onset of delinquent behaviour occurs through the imitation of peers' delinquent behaviour or through the observation of its consequences. The cognitive element in social learning, although present in Sutherland's account, has been increasingly stressed: on this view, what people may chiefly learn from peers is how to see the social world in a certain light.

Key findings on gang membership from American studies

Demographics

- Gang members are predominantly, but not exclusively, male.
- Gang members are also predominantly from ethnic minority populations.

Family

- Low income family, disrupted family, low parental attachment, and low parental supervision are risk factors leading to gang membership.

Individual factors

- Gang members are more impulsive, engage in more risk-seeking behaviour, and find it easier to justify fighting than non-gang members.
- Use of alcohol and drugs are linked to gang membership.

Peers

- Gang members have a lower commitment to conventional peers than non-gang members.
- Higher levels of exposure, attachment, and commitment to delinquent peers are predictors of gang membership.

School and community

- Gang members show less commitment and lower attachment to school than non-gang members.
- In neighbourhoods with a high proportion of delinquent youths, and where drugs are freely available, young people are more likely to join gangs than elsewhere.

Delinquency

- Gang members are more heavily involved in crime and delinquency than non-gang members
- During periods when they are members of gangs, individuals offend at a higher rate than during periods before or after their gang membership.

[Sources are listed in the references at the end of this report.]

Although there is still much more research on gangs in the US than elsewhere, there are current efforts to redress the balance, for example through the Eurogang network.³ As yet, little or no recent research has been undertaken on gangs and gang membership in the UK. There has also been a distinct lack of research examining the effect of gang membership on teenage offending in Britain. This report begins to fill the gap by describing the prevalence of gang membership, the characteristics of gang members, and the association between gang membership and delinquency among the Edinburgh Study cohort. The study of course describes one age cohort which transferred to secondary school in the autumn of 1998 in a single Scottish city, but in most respects we consider that Edinburgh is a microcosm containing all the extremes of poverty and wealth, and the gradations between, that are found in Britain at large. The main limitation is that ethnic minorities and Afro-Caribbeans in particular are a very

³ The Eurogang network was established by American and European researchers to facilitate comparative research using standardized instruments on youth gangs across a wide range of European countries. The network advocates multi-method research designs, incorporating both quantitative and ethnographic approaches. See Klein *et al.* (2001) for further details and preliminary results.

small proportion of Edinburgh's population, so it is not possible from this study to examine any linkages between ethnic minorities and gang membership.

Definitions and Method of Analysis

Questions on gang membership were designed before the Eurogang network had agreed its recommended questions and definitions.⁴ Those used here are not comparable with the Eurogang definitions, although both sets of questions ultimately rely on respondents' own interpretation of the word 'gang'. Like the Eurogang questions, the Edinburgh Study questions produce highly coherent and interpretable results. Similar questions were included at sweeps 2, 5, and 6, when respondents were aged roughly 13, 16, and 17.

- At sweep 2, the key questions were included in a section headed 'about your friends'. Respondents who said they usually went about with three or more friends at once were asked 'Would you call the group of friends you usually go about with a "gang"?' and, if so, 'Does your gang have a name?' and 'Does your gang have any special sayings or signs?'
- At sweep 5, these key questions remained essentially the same, but they were contained in a section headed 'hanging around'. Respondents were asked the gang questions if they answered that they 'usually hang around' with more than one or two other people. The key question became 'Would you call the group of friends you usually hang about with a "gang"?' (so *go about with* at sweep 2 had become *hang about with* at sweep 5).
- At sweep 6, as at sweep 2, the key questions were contained in a section headed 'your friends'; this time they were asked of all those who said they had any friends. These respondents were asked 'Have you ever been a member of a gang or young team?'⁵ If they answered 'yes' they were asked whether the gang had or has a name, special sayings or signs, how many people there were or are in the gang, and how old the members of the gang were or are. Finally they were asked whether they had been a member of this gang in the last year.

Thus the core questions have remained almost constant, but there has been some change in the context and structure of the questioning. Probably the most important change was the switch to an 'ever' question at sweep 6, followed by a question about membership in the last year, which might be expected to produce more affirmative answers.

This report considers gang membership over the 12-month reference period (the previous school year and summer holidays), ignoring the 'ever' question at sweep 6. Respondents are divided into gang members and non-gang members. Gang members are further divided into three groups according to whether their gang had both saying and sign, either saying or sign (but not both), or neither.

The response rate was 96 per cent at sweep 2, 90 per cent at sweep 5, and 80 per cent at sweep 6, when half of the cohort, having left school, had become much harder to

⁴ However, we plan to use the shortest version of the Eurogang instrument at the next sweep of data collection (probably in January to April 2007).

⁵ In local (Scottish) usage, 'young team' means 'gang'.

contact. There is some evidence of bias arising from the lower response rates at sweeps 5 and 6: non-respondents were somewhat more likely than respondents to be gang members and to be involved in crime and delinquency. In this report, we have not attempted to weight the results from sweeps 5 and 6 to correct any such bias. Instead, analyses showing change over the three sweeps are based on those who responded at all three sweeps; this means that, although the absolute figures may be somewhat influenced by response rates, changes between the sweeps do reflect changes in the behaviour or responses of the same group of young people in Edinburgh. Analyses based on a single sweep have been based on all those responding at that sweep. In any case, the response rates, even at sweep 6, are higher than in the vast majority of comparable research projects.

PART 1: PATTERNS OF GANG MEMBERSHIP

The peak level of gang membership was reached at sweep 2, when most respondents were aged 13. Overall, 21 per cent of all who responded at sweep 2 said they were gang members over the previous 12 months. Restricting the sample to those who responded at all three sweeps, we find that a slightly lower proportion, 18 per cent were gang members at sweep 2. This illustrates the slight bias that arises from non-response at later sweeps. Nevertheless, for the purpose of analysing change over time, we restrict the sample to those responding at all three sweeps (figure 1).

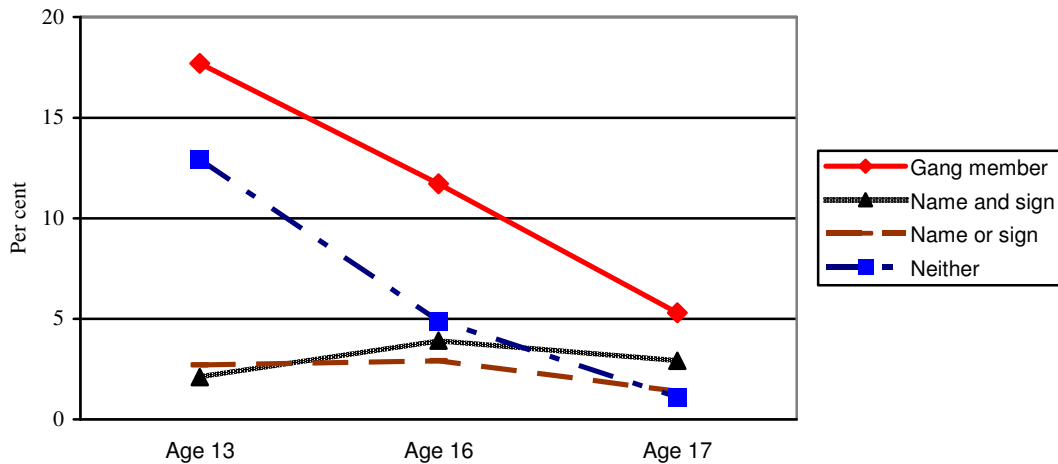


Figure 1: Gang membership during the last year at three sweeps, based on those responding at all three sweeps (n=3,207)

The overall proportion who said they belonged to a gang during the last year dropped from around 18 per cent at age 13 to 12 per cent at age 16, and further to 5 per cent at age 17.⁶ Because gang activity started so young then declined, it is clear that most gangs were not engaged in serious crime. There was, in fact, no mention of crime in the actual questions used to define gang membership. There was a precipitate decline between ages 13 and 16 in membership of gangs that had no name or sign,⁷ whereas membership of gangs with both name and sign significantly increased from age 13 to 16,⁸ then declined slightly (but not significantly) at age 17. The result is that, as might be expected, gangs with a stronger identity maintained their presence and accounted for an increasing proportion of gang membership over the years from around a quarter at age 13 to three quarters at age 17.

At all three sweeps nearly all of those who said their gang had a name or saying specified what it was. Signs were less often specified, probably only because respondents did not know how to describe or draw them. The fact that names and sayings were specified suggests that these gangs had some kind of real identity. A few of the names were jokes, such as ‘The This Is A Dumb Questions’ but most appeared genu-

⁶ The differences between the percentage who were gang members at one sweep and another are significant at the 99.9% level of confidence.

⁷ Significant at the 99.9% level of confidence.

⁸ Significant at the 95% level of confidence.

ine or at least plausibly zany. A substantial proportion were territorial, although it is not possible to say just how many because often initials only were given. ‘Young Team’ was a part of many names, and the word ‘mental’ appeared several times. Signs and sayings were very varied. Much more detailed research would be needed to decipher the meanings of names, signs and sayings, but most were subversive in a jokey way. A considerable number of those that appeared at sweep 5 reappeared a year later, suggesting that they were more than instant improvisations.

At sweep 6, gang members⁹ were asked how many people there were in the gang, and what age groups were included. Nearly half (49 per cent) of their gangs included 20 or more people, and 30 per cent included between 11 and 20 people, so they were fairly large. At this stage, most cohort members were aged 17, and the age groups most strongly represented in their gangs were 17-18 and 15-16, although older and younger age groups were also included in one-third or more of gangs (table 1). There was little or no tendency on average for the gangs to be weighted towards people older or younger than cohort members themselves.

Table 1: Age composition of gangs at sweep 6 (n=198)

<i>Age groups in gang</i>	<i>% of gang members (last 12 months)</i>
Under 10	1.5
11-12	4.6
13-14	31.3
15-16	81.3
17-18	83.2
19-20	33.5
Over 20	16.2

Note: percentages do not total 100 as more than one response was permitted.

Characteristics of Gang Members

Although there was a considerable involvement of girls as well as boys in gang activity, between the ages of 13 and 17 it became more common for boys than girls to be gang members. At sweep 2 (age 13), a slightly higher proportion of girls than boys were gang members (table 2). By sweep 5 (age 16) this had reversed, and the proportion of gang members was considerably higher among boys than girls (15.6 compared with 10.8 per cent).¹⁰ A year later, the male predominance in gang membership had become more marked. Focusing on the ‘hard core’ of gang membership—those belonging to a gang having both a name and a sign or saying—these were already a higher proportion of boys than girls at sweep 2. At sweeps 5 and 6 the proportion of boys in the ‘hard core’ group was three times that of girls.

⁹ Findings quoted here are restricted to those who had belonged to a gang during the previous 12 months.

¹⁰ At age 13, the difference between boys and girls is significant at the 95% level of confidence, whereas the reversed difference at age 16 is significant at the 99.9% level of confidence.

Gang membership was distinctly more common at every sweep among those from manual than non-manual households, and this difference was much the same for each of the three gang categories.

Table 2: Gang membership by sex and social class

Column percentages

<i>Sweep 2</i>	Male	Female	Manual ^a	Non-manual
Gang member	18.8	21.5	24.7	15.9
Name & sign	4.0	2.5	5.3	1.4
Name or sign	3.8	3.6	5.1	2.7
No name or sign	11.0	15.3	14.2	11.9
N	2,152	2,091	1,821	2,184
<i>Sweep 5</i>				
Gang member	15.6	10.8	17.1	9.4
Name & sign	7.3	2.0	6.0	3.5
Name or sign	3.8	2.8	4.6	2.0
No name or sign	4.5	5.8	6.4	3.9
N	1,878	1,958	1,572	2,089
<i>Sweep 6</i>				
Gang member	8.0	3.5	7.6	4.3
Name & sign	4.6	1.5	3.8	2.5
Name or sign	2.3	0.9	2.4	1.0
No name or sign	1.1	1.1	1.5	0.8
N	1,664	1,831	1,404	1,942

^aAlso including those not living with their parents (e.g. in care) and those whose parents were unemployed; based on self-report information from sweep 1 and the survey of parents at sweep 4.

Gang membership was higher among those not living in a family with both parents than among those in two-parent families, and as gang membership became much less common from sweeps 2 to 6, so this contrast increased (table 3).¹¹

Table 3: Gang membership by family structure

	Living with both parents		Not living with both parents	
	% gang members	N	% gang members	N
Sweep 2	17.9	2,579	23.0	1,358
Sweep 5	11.9	2,497	15.2	1,238
Sweep 6	4.0	2,323	8.5	1,089

Gang membership was more closely related to the social class mix of the neighbourhood than to the social class of the individual family. As part of the Edinburgh Study research programme, the City of Edinburgh has been divided into 91 neighbourhoods, as far as possible along ‘natural’ boundaries that reflect local names and identities. Using 1991 census data, each of these neighbourhoods has been assigned a score,

¹¹ Differences between those who do and do not live with their parents are significant at the 99.9% level of confidence at all three sweeps.

based on six indicators, that reflects the level of social and economic deprivation. In the following analysis, the 91 neighbourhoods were divided into five groups of roughly equal size on the basis of this deprivation score. As shown in table 4, gang membership at all three sweeps was consistently related to the level of deprivation, and was considerably higher in the more deprived neighbourhoods. This relationship became stronger at sweeps 5 and 6, as gang membership became less common. At sweep 6, the proportion of gang members in the most deprived neighbourhoods was three times that in the least deprived.¹²

Table 4: Gang membership by neighbourhood deprivation

% gang members	Neighbourhoods grouped from low (1) to high (5) deprivation				
	1	2	3	4	5
Sweep 2	13.5	18.9	23.1	19.5	26.9
Sweep 5	7.6	10.2	13.9	15.6	20.4
Sweep 6	3.2	3.8	6.3	7.0	9.3

¹² In order to demonstrate conclusively that the differences between respondents according to neighbourhood deprivation are statistically significant, and that they are greater than the difference according to individual social class, a more elaborate form of analysis is needed. The findings of such an analysis will be published elsewhere.

PART 2: GANG MEMBERSHIP AND DELINQUENCY

As set out earlier, the questions about gang membership and the definition of membership used in this analysis make no reference to crime, delinquency, or misbehaviour. Therefore gang membership is not by definition associated with offending. Nevertheless, the findings show a close association between gang membership and delinquency among members of the cohort. Three types of analysis are used to examine this association. First, we ask the simple question whether members of gangs at a given sweep have higher rates of self-reported delinquency than non-members. Second, we ask whether the same individuals have higher rates of delinquency during periods when they are members of gangs than at other times. Third, we ask whether gang membership at a particular sweep helps to explain delinquency after allowing for the effects of other salient factors. None of these forms of analysis on its own can definitively establish that gang membership causes crime or delinquency. In combination, however, they can provide strong indications that causal relationships are involved, although these could be mutual and circular: gang membership may cause delinquency, while at the same time delinquency may reinforce identification with the gang.

Cohort members were asked whether they had engaged in a number of forms of crime and delinquency over the past 12 months and if so how many times. The results were used to compute a volume measure of the total number of delinquent acts committed.¹³ As cohort members grew older, a few items were dropped (e.g. truancy) and some new items added (e.g. credit card fraud). This was necessary to ensure that the study would accurately reflect the changing pattern of offending as young people mature, but it does complicate analysis. Items included at the three sweeps are listed in the panel on the previous page. The analysis shown in table 6 uses all items available at each sweep, which means that the results for the three sweeps are not strictly comparable. It shows a strong and regular relationship at every sweep between gang membership category and the mean volume of delinquency, such that each successive gang membership category is associated with a higher level of delinquency, on average. At sweep 6, when cohort members were aged about 17, volume of delinquency was eight times as high among members of gangs having both a name and sign or saying as among those who were not gang members. Nevertheless, it was not only these 'hard core' gang members who tended to be delinquent. Among members of the least well-defined gangs (those with no name or sign) volume of delinquency was twice as high as among those who were not gang members at sweep 2, and this contrast increased at sweeps 5 and 6.

¹³ The reference period was the last school year, including the summer holidays. The volume measure is not exact (because answers were grouped) and tends to be an under-estimate (since the top category of 10+ was interpreted as 11).

Sweep 2	Sweep 5	Sweep 6
Fare-dodging	Fare-dodging	
Shoplifting	Shoplifting	Shoplifting
Noisy or cheeky in public	Noisy or cheeky in public	Noisy or cheeky in public
Joyriding*	Joyriding*	Joyriding*
Theft from school		
Carrying a weapon*	Carrying a weapon*	Carrying a weapon*
Damage to property*	Damage to property*	Damage to property*
Housebreaking*	Housebreaking*	Housebreaking*
Writing or spraying graffiti	Writing or spraying graffiti	
Robbery*	Robbery*	Robbery*
Theft from home		
Fire raising*	Fire raising*	Fire raising*
Assault	Assault	Assault
Car-breaking*	Car-breaking*	Car-breaking*
Truancy		
Harming or injuring animals	Harming or injuring animals	Harming or injuring animals
	Selling drugs	Selling drugs
	Selling stolen property	Selling stolen property
	Racial assault or harassment	Racial assault or harassment
		Buying stolen goods
		Benefit fraud
		Credit card etc. fraud

*These 7 items were included in the measure of serious delinquency. They were included at all three sweeps.

Table 5: Mean volume of delinquency by gang membership category at the same sweep

<i>Gang category</i>	Sweep 2	Sweep 5	Sweep 6
Name and sign	31.76	22.16	21.29
Name or sign	25.21	17.84	15.89
No name or sign	15.47	13.09	7.64
Not gang member	7.07	5.44	2.64

Note: all available delinquency items are included at each sweep (see panel above) hence scores for different sweeps are not strictly comparable.

It is important to assess whether gang membership becomes more or less closely associated with delinquency as young people develop from the age of 13 to 17. This can be done by using a volume of delinquency score based only on the 11 identical items included at all three sweeps (Table 6, middle column). It is clear that by the age of 17, the link between gang membership and delinquency was considerably stronger than earlier. At sweep 2, mean volume of delinquency (using the comparable measure) was 2.87 times as high among gang members as among non-members; by sweep 6, it was 6.42 times as high. The right-hand column of the table shows roughly the same contrast between members and non-members of gangs when serious instead of broad delinquency is considered. These initial findings suggest that gang membership (although not defined by reference to crime or bad behaviour) is very closely linked with delinquency, and that the link becomes stronger through the teenage years. This fits well with the evidence from many sources including the Edinburgh Study that offending in the teenage years is often a group activity.

Table 6: Mean volume of delinquency (three measures) by gang membership at the same sweep

	All items	11 comparable items	7 serious items	N
<i>Sweep 2</i>				
Gang member	19.92	11.95	4.21	812
Not gang member	7.07	4.17	1.05	3,262
<i>Sweep 5</i>				
Gang member	17.54	11.17	4.88	686
Not gang member	5.44	3.10	1.13	2,917
<i>Sweep 6</i>				
Gang member	16.96	12.58	5.51	599
Not gang member	2.64	1.96	0.70	2,676

A more powerful form of analysis exploits the longitudinal design of the Edinburgh Study to examine whether the same individuals committed more delinquent acts during periods when they were gang members than at other times. The first analysis of this kind (table 7) considers gang membership and delinquency at sweeps 2 and 5, and relates to the 3,477 cohort members for whom both gang membership and delinquency data are available at both sweeps. The delinquency measure covers the 13 identical items that were included at these two sweeps. For those whose gang membership remained constant (those who were members at both sweeps, or at neither) the mean volume of delinquency declined from sweep 2 to 5 in line with the overall decline between the ages of 13 and 16 that was noted earlier. Among those who were gang members at sweep 2, but not sweep 5, there was a far greater decline in delinquency; by contrast, among those who were not members at sweep 2, but became members at sweep 5, there was a distinct increase in delinquency (despite the general decline for the whole cohort over the same period). These findings convincingly demonstrate that *change* in levels of delinquency within the same individuals is closely linked to gang membership.¹⁴

Table 7: Mean volume of delinquency at sweeps 2 and 5 by gang membership at sweeps 2 and 5: N = 3,477

<i>Gang membership at sweeps 2 and 5</i>	Volume of delinquency at			
	Sweep 2		Sweep 5	
	Mean	SE	Mean	SE
Member at neither 2 nor 5	5.14	0.168	3.02	0.141
Member at both 2 & 5	18.02	1.360	14.53	1.270
Member at 2, not 5	14.07	0.724	5.03	0.371
Member at 5, not 2	8.36	0.699	9.86	0.860

¹⁴ Table 7 gives the standard errors of the means. The 95% confidence limits of each mean are 1.96 x its standard error. The standard errors are fairly low, making it clear that the statements made in the text are well founded.

A similar analysis was carried out for sweeps 5 and 6. This time the delinquency score was based on the 14 identical items included at both of these two sweeps, and on the 3,201 individuals for whom all of the relevant information was available. The pattern of findings was again closely similar (see table 8).¹⁵

Table 8: Mean volume of delinquency at sweeps 5 and 6 by gang membership at sweeps 5 and 6: N = 3,201

<i>Gang membership at sweeps 5 and 6</i>	Volume of delinquency at			
	Sweep 5		Sweep 6	
	Mean	SE	Mean	SE
Member at neither 5 nor 6	3.08	0.137	1.97	0.096
Member at both 5 & 6	22.64	2.132	17.53	2.077
Member at 5, not 6	9.29	0.892	5.37	0.577
Member at 6, not 5	9.55	1.821	11.56	1.788

A third way of assessing the importance of the link between gang membership and delinquency is to show how strong this link is after controlling for the effects of other explanatory factors. As an illustration, an analysis of this kind has been carried out for sweep 2, when gang membership was at its highest. The analysis shows how much effect gang membership had on an individual's level of delinquency after controlling for the effects of the following other variables: gender, social class, impulsivity, risk-taking, risky spare-time activities, parental supervision, and conflict with parents. After allowing for the influence of these other explanatory variables, gang membership was still found to be significantly and strongly related to the individual's overall involvement in delinquency. A second model also controlled for an additional explanatory variable: the level of delinquency of the individual's circle of friends. Gang membership was still significantly related to the individual's level of delinquency even after controlling for the level of delinquency of his or her friends, showing that membership of something described as a gang had an effect over and above relationships with friends described as delinquent. In fact, this analysis understates the importance of gang membership, because it exaggerates the importance of friends' delinquency. (For more details of this multivariate analysis, see Appendix 1.)

¹⁵ Although the standard errors shown in table 8 are fairly high for the group who were gang members at both sweeps 5 and 6, this does not shake the interpretation given in the text.

PART 3: GANG MEMBERSHIP AND SUBSTANCE USE

At sweep 2, smoking (a fairly deviant activity at the age of 13) was closely related to gang membership (table 9). The strength of this relationship diminished at sweeps 5 and 6, probably because smoking is a much less deviant activity by the age of 16 or 17. Smoking was more common among girls than boys, and among girls the link between gang membership and smoking was just as strong as among boys, or if anything stronger.

Table 9: Daily smokers by gang membership

% of each gang membership category who were daily smokers

<i>Gang membership</i>	Sweep 2	Sweep 5	Sweep 6
Name and sign	26.3	33.1	48.5
Name or sign	18.4	39.5	58.2
Neither name nor sign	8.7	33.8	41.0
Not gang member	3.0	17.6	20.4
N	4,201	3,821	3,452

Teenage drinking is more ambiguous than smoking in that it can happen with adult approval in the family setting and in other contexts, but may more often take place among groups of youths; in the latter case only it will often involve breaking the law by buying drinks at a shop, off-license, or pub, or else by stealing them. At sweep 2 (age 13) only 7 per cent of cohort members drank alcohol at least once a week, but this percentage was three times as high among gang as among non-gang members (table 11). By sweep 5 (age 16), the proportion who drank weekly had grown from 7 to 43 per cent. Because drinking weekly had become almost normal, the contrast between gang and non-gang members, although still marked, had become less striking. However, by shifting the criterion to a higher frequency (several times a week) we identify a level of drinking that is still deviant at this age; for more than weekly drinking, the contrast between gang and non-gang members remained about the same as at sweep 2. By sweep 6, the proportion of cohort members drinking weekly had risen to 53 per cent, and the contrast between gang and non-gang members in weekly drinking had reduced further. The contrast in more than weekly drinking remained strong, although that too had diminished since sweep 5 (table 10, percentages in brackets).

Table 10: Weekly drinkers by gang membership

% who drink weekly (% who drink several times a week)

	Sweep 2	Sweep 5	Sweep 6
Gang member	15.2	65.4 (29.4)	75.1 (41.6)
Not gang member	4.6	39.6 (11.7)	51.9 (19.2)
N	4,206	3,790	3,468

At sweep 2, 7 per cent of cohort members had taken an illicit drug over the past 12 months, most commonly cannabis or sniffing glue.¹⁶ As shown in table 11, use of illicit drugs was very strongly associated with gang membership: the proportion who had taken any illicit drug was about eight times as high among the ‘hard core’ gang group as among non-gang members (33 per cent compared with 4 per cent). If anything, there was an even greater contrast in the proportion who had taken drugs four or more times. This is illustrated nicely in figure 2.

Table 11: Drug use by gang membership

Percentages

<i>Sweep 2</i>	Gang membership				
	Name & sign	Name or sign	Neither name nor sign	Not gang member	Total gang members
Any drug	33	21	11	4	16
Used 4+ times	18	9	5	2	7
N	126	152	542	3,355	820
<i>Sweep 5</i>					
Any drug	52	49	42	31	47
Used 11+ times	21	15	7	5	14
Cannabis and volatiles only	31	22	30	21	28
Other drugs	17	22	12	8	16
N	178	125	197	3,327	500
<i>Sweep 6</i>					
Any drug	71	63	51	37	64
Used 7+ times	21	9	8	2	15
Cannabis and volatiles only	38	37	31	26	36
Other drugs	33	26	21	11	28
N	95	54	39	3,447	188

By sweep 5 (age 16), the proportion who had used illicit drugs in the past year had risen from 7 to 33 per cent. The proportion who had used any illicit drug was now less strongly related to gang membership, probably because this was more common and hence less deviant behaviour. As an illustration, at sweep 2 the proportion who had used an illicit drug was four times as high among gang as among non-gang members, whereas it was 1.55 times as high at sweep 5. Among ‘hard-core’ gang members, the proportion who had used an illicit drug was 8 times as high as among non-gang members at sweep 2, dropping to 1.71 times at sweep 5. However, at sweep 5 as at sweep 2, the proportion of frequent drug users was more strongly related to gang membership than the proportion who had used at all.¹⁷ At sweep 5, use of cannabis and volatiles only (without use of other, mostly harder, drugs) was only weakly re-

¹⁶ We asked about 11 types of drug. A few (including glue and poppers) are not strictly speaking illegal, but all are of course strongly disapproved of.

¹⁷ The definition of more frequent users had to be changed between sweeps, because of changes in the questioning. This means that very close comparisons on this point cannot be made between sweeps. Nevertheless, the general pattern is similar: at every sweep, frequent use is more closely related to gang membership than is any illicit drug use.

lated to gang membership, whereas use of harder drugs was much more strongly related (table 11).¹⁸

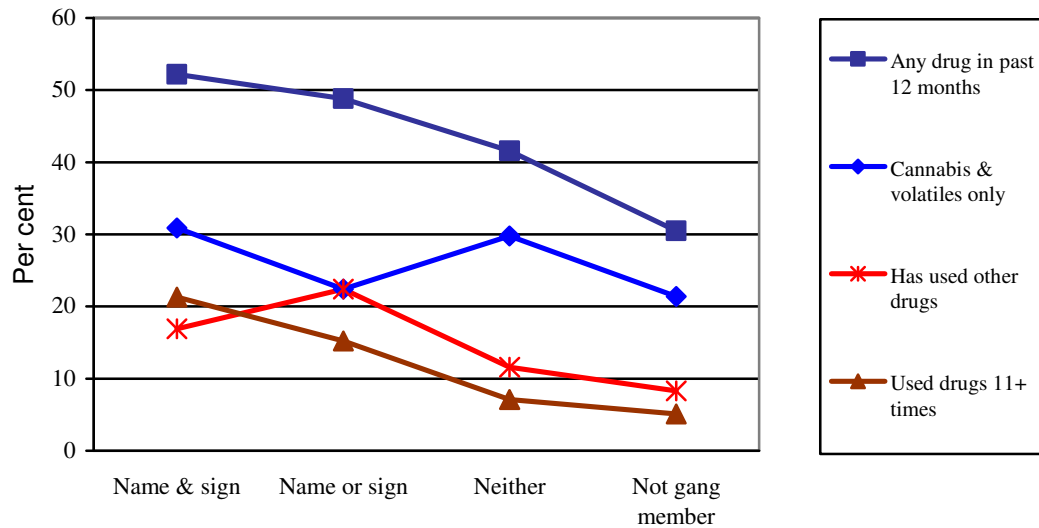


Figure 2: Drug use patterns by gang membership at sweep 5

By sweep 6 (age 17), the proportion who had used any illicit drug in the past year had increased slightly from 33 to 38 per cent. Frequent use (seven or more occasions in the past year) was very strongly related to gang membership (table 11), and any drug use less strongly related. As before, use of cannabis and volatiles was only weakly related to gang membership, whereas use of harder drugs was much more strongly related.

¹⁸ At sweep 2, use of drugs other than cannabis and volatiles was rare, so the proportion using cannabis and volatiles only is not shown in table 11.

CONCLUSIONS

In the Edinburgh Study, gang membership was defined by self-nomination. As well as being the only practicable method in a large-scale study, this has often been regarded as the best approach in principle (Esbensen and Weerman, 2005). Gang activity, and whatever it is that constitutes a gang, have to be understood primarily from the perspective of the participants. In the case of crime and delinquency, several measures are available (offenders' reports, victims' reports, official records) and these have roughly equal status. In the case of gang membership, no clear-cut measures are available other than the reports of the participants. Although this logic seems inescapable, it does present problems, because young people might find it attractive to see and represent themselves as belonging to a gang even if they had little real investment in gang activity, and their inclination to describe themselves as belonging to a gang might change over the teenage years without much change in their actual pattern of spare-time activity. This raises the possibility that gang membership, as defined in the Edinburgh Study, follows on from disruptive or delinquent activity, rather than the other way round. Young people could describe themselves as gang members in order to explain or justify their behaviour, or perhaps in order to represent themselves as rebellious or to identify themselves with the teenage group rather than with their parents or other adults.

The findings show that gang membership, as common among girls as boys at the age of 13, declined quite rapidly thereafter, and did so more rapidly in girls than in boys. This fits with the general pattern of earlier maturity in girls compared with boys. There was some tendency for gang membership to be higher among young people who were not from conventional two-parent families, and among those from less affluent families, but more striking was the much higher level of gang membership in deprived neighbourhoods. This strongly suggests that the contextual or ecological influences on gang membership are more important than the individual or family influences. Both delinquency and substance use were strongly related to gang membership throughout the years from 13 to 17, and this fits with the finding from a wide range of studies that teenage crime tends to be a group activity. The same individuals committed substantially more offences during periods of gang membership than at other times, suggesting that there is a close specific link between gang membership and offending, which cannot be explained by individual characteristics that remain fairly stable over time. Gang membership had a significant and strong statistical effect on delinquency after controlling for a range of other variables.

These findings certainly show that teenage offending is closely related to gang activity and cannot be understood except in that context. They strongly suggest that gang activities lead to offending, but it is also possible that young people become involved in gangs, or define themselves as being members, partly as a response to their prior involvement in offending.

APPENDIX 1: ORDINAL REGRESSION ANALYSIS

The outcome (dependent) variable in these models was the total volume of self-reported delinquency at sweep 2, based on all 16 delinquency items. Respondents were divided into five ordered categories from zero to high volume of delinquency. The model estimates the effect of a range of explanatory (independent) variables, including gang membership, on level of delinquency. The effect of each variable is estimated after controlling for the effects of all of the others. The continuous variables were standardized, so that the coefficients for different continuous variables can be directly compared. Two models were specified, the difference being that the second model included friends' reported level of delinquency in addition to the other variables. Respondents were asked whether their friends had engaged in each of the 16 forms of delinquency during the reference period; this was used to compute measure of 'variety' of friends' delinquency (the number of different forms of delinquency, between 0 and 16, in which friends were said to have engaged).

The purpose of the second model, which includes friends' delinquency, is to help establish whether being a member of a gang has an effect on delinquency over and above the effect of having delinquent friends. However, the measure of friends' delinquency over-states the link between own and friends' delinquency. This is because reports of friends' delinquency are not independent of reports of own delinquency: they come from the same individual. Youths will tend to give similar reports about their own and their friends' delinquency, for example to make their own bad behaviour seem normal. This means that the effect of friends' delinquency on own delinquency is exaggerated in the second model, so that consequently the effect of gang membership is under-stated.

Tables A1 and A2 below show the standardized coefficients for the variables included in the two models. In the model excluding friends' delinquency (table A1) gang membership was found to have a statistically significant and strong effect on delinquency after allowing for the influence of the other explanatory variables. The effects of the four categories of gang membership were also highly consistent, as in the simpler analysis shown in table 5. In the context of the model, the effect of gang membership appeared stronger than that of any other variable.

When friends' delinquency was also included in the model, it was found, as expected, to have a very large effect on own delinquency, and the effects of all other explanatory variables were reduced. Nevertheless, the effect of gang membership on delinquency remained strong and statistically significant even after allowing for the artificially inflated effect of friends' delinquency (table A2). These findings imply that after allowing for the influence of delinquent friends and a range of other explanatory factors, being a member of a gang is closely linked with delinquency.

Table A1 Ordinal regression model, sweep 2: outcome, total volume of delinquency (friends' delinquency *not* included as an explanatory variable)

	Coefficient (Beta)	Standard error	Significance
Male	0.27	0.07	0.000
Social class manual, unemployed, or not living with parents	0.25	0.07	0.000
Not gang member	-1.92	0.22	0.000
Gang member, no name or sign	-1.20	0.23	0.000
Gang member, name or sign	-0.29	0.28	0.287
Gang member, name and sign	0.00	.	.
Impulsivity	0.32	0.04	0.000
Risk-taking	0.52	0.04	0.000
Risky spare-time activities (cinemas, arcades, discos)	0.26	0.04	0.000
Parental supervision	-0.65	0.04	0.000
Conflict with parents	0.37	0.04	0.000

Table A1 Ordinal regression model, sweep 2: outcome, total volume of delinquency (friends' delinquency included as an explanatory variable)

	Coefficient (Beta)	Standard error	Significance
Male	0.18	0.07	0.009
Social class manual, unemployed, or not living with parents	0.19	0.07	0.006
Not gang member	-0.89	0.24	0.000
Gang member, no name or sign	-0.39	0.25	0.122
Gang member, name or sign	-0.13	0.30	0.669
Gang member, name and sign	0.00	.	.
Impulsivity	0.24	0.04	0.000
Risk-taking	0.37	0.04	0.000
Risky spare-time activities (cinemas, arcades, discos)	0.18	0.04	0.000
Parental supervision	-0.48	0.04	0.000
Conflict with parents	0.23	0.04	0.000
Friends' delinquency (variety score)	1.47	0.05	0.000

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