

Parenting and Delinquency at Ages 12 to 15

David Smith



Number 3
The Edinburgh Study of Youth Transitions and Crime

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Old College
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EH8 9YL

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Number 2: Gender and Youth Offending

Number 4: Truancy, School Exclusion and Substance Misuse

Number 5: The Links Between Victimization and Offending

KEY FINDINGS

Styles of parenting are closely related to crime and antisocial behaviour in teenagers.

Aspects of parenting and family functioning when children were aged 13 were good predictors of juvenile delinquency two years later, when they were aged 15. This demonstrates that parenting had a genuine causal influence on the later behaviour of teenagers.

When young people were aged 15, seven distinct dimensions of parenting and family functioning were independently related to levels of delinquency. The most important factors were parents tracking and monitoring behaviour, the child's willingness to disclose information, parental consistency, and avoiding parent/child conflict and excessive punishment.

The findings fit with a social learning theory of effective parenting and child development. The key idea is that children will repeat patterns of behaviour that reward them in the short term. Parents should ensure that only acceptable behaviour is rewarded.

Parenting and family functioning are influenced by the social context. Parents with poor resources and in deprived neighbourhoods find it more difficult to be effective.

The findings highlight programmes for improving parenting skills as a possible means of reducing crime, but there are limits to what the state can do to encourage better parenting and it is particularly difficult to help those who are most in need.

INTRODUCTION

Many current policy initiatives, both in Scotland and elsewhere in the UK, aim to reduce youth crime by targeting parents. These initiatives are based on the assumption that styles of parenting have an important influence on adolescent behaviour. In broad terms, that assumption is backed up by a great weight of evidence from social science research. The purpose of this paper is to describe the relationship between parenting and youth crime in more detail, and thus to support a closer analysis of the kinds of policy that are likely to be successful in this field. 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 among a single cohort of 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)

Research Team

- David Smith, Lesley McAra
- Susan McVie, Lucy Holmes, Jackie Palmer

Study Funding

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

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

Information about parenting and family functioning was obtained at each sweep from the young people themselves. In addition, a survey of one parent (the main care-giver) of each cohort member was carried out in the autumn of 2001, concurrently with sweep 4. Detailed and parallel measures of parenting and family functioning were included in the survey of parents and in the sweep 4 questionnaires completed by their children at about the same time.² The study therefore provides a balanced picture of the parent/child relationship as seen by both sides.

Context

Seventeen years ago, Loeber and Stouthamer-Loeber (1986) completed a review of the evidence on links between parenting and delinquency in children. There were many longitudinal studies, in which children had been followed up over a number of years to study the later effects of earlier parenting styles, as well as many contemporaneous studies, in which parenting and delinquency had been studied at the same point in time. The authors concluded that there was extensive evidence to show that several aspects of parenting have an influence. They outlined four ‘paradigms’ of parenting styles leading to delinquency: (1) neglect (lack of supervision, lack of involvement); (2) conflict (inadequate, harsh, or inconsistent discipline, rejection); (3) parents’ deviant behaviours and attitudes; (4) family disruption (marital breakup, absence of a parent, parental illness). Although many studies have been published since, an updated review would come to similar conclusions.

There is an important stream of research which examines the detailed interactions between parents and children that underlie this pattern of findings. Social learning theory underpins the most promising efforts to understand how specific patterns of interaction lead to effective or ineffective parental control. According to social learning theory, children repeat the behaviour patterns that work for them in the short term—that produce what they want. In particular, according to Patterson et al. (1992), children behave ‘coercively’—whine or throw tantrums—because their parents respond by letting them have what they want. By contrast, effective parents consistently ensure that coercive behaviour is not rewarded. On this model effective parenting involves tracking and classifying behaviour, which means watching or monitoring what the child is doing; ignoring trivial coercive behaviours; and making sure that there are predictable consequences of different kinds of behaviour. In coercive families, parent and child have equal power, and alternate the roles of victim and aggressor; the parents are randomly harsh and indulgent. In normal families, power is unequal, and the parent usually wins; at the same time, boundaries are clearer, and are more consistently enforced. Coercive parents are authoritarian, whereas normal parents negotiate from a position of power. In normal families, therefore, boundaries are clear for the time being, but are open to re-negotiation. Flexibility, discussion, and constant re-negotiation help to establish the parent’s authority on a firm foundation of legitimacy.

Much of this theorizing and research lacks realism, because it considers the individual family in isolation from its social setting of friends, neighbourhood, and city. Bronfen-

² We are grateful to the Nuffield Foundation, which funded the survey of parents.

brenner (1979) visualized the family at the centre of a series of widening concentric circles marked by the school, neighbourhood, and city, but very little research has looked at the way the family interacts with its social setting. It seems reasonable to expect that parenting will be easier where other adults in the neighbourhood have the same expectations as the parents (*concordance*), and more difficult where there is *dissonance* between usual behaviour within the family and outside. Parents' access to power and influence may be important in reinforcing their control over the child, whereas parents who are impotent—for example, who cannot make any impression on teachers—may lose the child's respect. On the other hand, the help and support that parents can provide may be more or less appropriate to the neighbourhood: for example, middle class fathers may not know how to help their sons defend themselves in a tough neighbourhood. These interactions between family and social setting—at present, too little understood—re-emphasize the importance of family influences. There is evidence that social deprivation in and of itself has only a modest *direct* influence on criminal offending—contrary to what is assumed by most politicians and commentators. However, deprivation and environmental decay are important parts of the social setting of families. We must expect that it will be much more difficult to become an effective parent if there is a lack of time, energy, money, living space, books, shops, and stimulating play facilities. Hence, social deprivation may have an *indirect and long-term* influence on criminal offending by making it difficult for families to function effectively. As argued by Sampson and Laub (1993), the family is the site where aspects of social structure such as over-crowded housing, unemployment, poverty, and an ugly physical environment are converted into personal characteristics, such as poor self-control and social skills, among the *next* generation.

The Edinburgh Study is designed to assess the influence of family functioning and also to describe the interactions between families and their social setting. This paper focuses on the influence of the family itself, whereas the neighbourhood setting will be considered in a later paper in this series.

Key arguments

The Edinburgh Study findings support the idea that social learning can explain the influence of parenting on delinquency (Patterson et al., 1992). In line with this theory, tracking and monitoring adolescents' behaviour is found to be the key to controlling it. The importance of parental consistency is confirmed. The findings also support the emphasis in Patterson's theory on establishing the legitimacy of parental authority through openness to discussion and negotiation. Although tracking and monitoring has key importance, the analysis shows that this can only be accomplished with the co-operation of the young person (confirming recent findings by Kerr, Stattin, and Trost, 1999; and by Kerr and Stattin, 2000).

Although the findings confirm that parenting is highly influential, they also illustrate problems and limitations of policies aimed at improving parenting. Parents fail to control their teenage children usually because they lack the resources and skills to do better, and often because their local environment makes it difficult for them to succeed. The deficits of those most in need make it harder for them to benefit from parenting programmes.

Structure of the report

The first section describes the measures of parenting and family functioning that are used in the Edinburgh Study, and also the measures of delinquency and use of alcohol, cigarettes, and illicit drugs. It then describes the patterns of association, at sweep 4 (age 15) between parenting and family functioning on the one hand and delinquency and substance use on the other. The second section describes an analysis that makes use of the longitudinal design of the Edinburgh Study. Family functioning at sweep two, as described by young people at the age of 13, is used to predict delinquency two years later, at sweep 4 (age 15). This analysis provides robust evidence that parenting styles have an influence on the later development of delinquent behaviour. The third section reports on an analysis that makes use of the more detailed measures of parenting and family functioning that are available at sweep 4, when the survey of parents was carried out to complement the questionnaires completed by young cohort members. This analysis looks in more depth and detail at the features of family dynamics that are related to lower and higher levels of delinquency in young people. A final section of brief conclusions draws out the policy implications of the findings.

ASSOCIATION BETWEEN FAMILY FUNCTIONING AND DELINQUENCY

Measures of eight different aspects of family functioning were included at sweep 4, when cohort members were aged 15. In each case, the same or closely similar measures were included in the young person's questionnaire and in the survey of parents. Minor differences occurred because certain items could not apply in the same way to parents and teenage children. Three of these measures (parental monitoring, trust/autonomy, and parent/child conflict) were closely similar to measures included at earlier sweeps. Four of the measures were entirely new (time that parents and child spent doing things together, level of parental punishment, use of negotiation, consistency of parental control). The measure of disclosure by the child was an expansion of the measure of parental monitoring, arising out of the work of Kerr and Stattin (2000), who found that parental monitoring is dependent on what the young person is willing to disclose.

Fuller details of these measures are given in the panel on the two following pages. On each dimension, two measures are available, one based on the young person's assessment, the other on the parent's assessment. A third, composite measure was derived by equally balancing the young person's and parent's accounts. Delinquency was assessed from the reports of the young people themselves. A broad measure covers 18 types of delinquent act, most of them criminal (see panel); a serious measure is confined to the seven types of act that young people themselves considered to be most serious.

Table 1 shows the correlations at sweep 4 (age 15) between broad delinquency and each of the measures of family functioning. On each dimension, the correlations are quoted for the three measures (young people, parents, composite). The table also shows the correlations between the accounts given by parents and young people on each dimension. Correlation coefficients range from 0, meaning that the two measures are unrelated, to 1, meaning that they are perfectly correlated. In social science, a coefficient of .5 indicates a very strong relationship.

PARENTAL MONITORING

When you went out during the last year, how often did your parents know

- Where you were going
- Who you were going out with
- What you were doing
- What time you would be home

Verbal scale: always, usually, sometimes, never

Wording adapted for the parents' survey.

PARENTAL TRUST/AUTONOMY AFFORDED TO THE YOUNG PERSON

How often does the parent

- Tell you that you shouldn't argue with adults
- Let you make your own decisions about what films and TV programmes to watch
- Trust you to do what you say you will do
- Let you decide what clothes to buy and wear.

Verbal scale: always, usually, sometimes, never

Wording adapted for the parents' survey.

CONFLICT BETWEEN PARENTS AND CHILD

How often do you argue with your parents/child about

- How tidy your room is
- What you do when you go out
- What time you come home
- Who you hang about with
- Your clothes and appearance
- Other things

Verbal scale: always, usually, sometimes, never

TIME SPENT BY PARENTS AND CHILD DOING THINGS TOGETHER

Examples given were talking, playing sports, going out.

A separate question was asked for weekdays and weekends, and the total number of hours computed from the two questions.

TELLING OR KEEPING SECRETS

How often do you tell your parents about

- Things that happen at school
- What you have been doing when you are out

How often do you keep secrets from your parents about

- Who you have been spending time with
- Where you have been when you are out

Verbal scale: often; sometimes; hardly ever or never.

The same items, with wording adapted, was used in the parents' survey, but with a four-point verbal scale, separating 'hardly ever' and 'never'.

LEVEL OF PARENTAL PUNISHMENT

How often do your parents punish you in these ways?

- Tell you off or give you a row
- Ground you or stop you going out
- Stop your pocket money
- Stop you from seeing your friends
- Punish you in some other way

Verbal scale: always, usually, sometimes, never.

The wording was adapted for the parents' survey, and three additional items were included

- Shout at him/her
- Hit or slap him/her
- Tell him/her to get out or lock him/her out of the house

The 'other' item was, however, omitted.

The verbal scale was extended for parents because they were reluctant to admit to doing most of these things. The five-point scale used was: most days; at least once a week; less than once a week; hardly ever; never.

NEGOTIATION TO RESOLVE CONFLICT

When you disagree about things with your parents, how often

- Do you and your parents discuss it calmly
- Do you listen to your parents' point of view
- Do your parents listen to your point of view
- Do your parents just tell you to accept what they say

Verbal scale: always, usually, sometimes, never.

The wording was adapted for the parents' survey.

CONSISTENCY OF PARENTAL CONTROL

- How often do your parents let you get away with things you have done wrong?
- How often do you know what your parents will do when you have done something wrong?
- How often do your parents give up when they ask you to do something and you don't do it?
- When your parents decide to punish you a certain way, how often do you go on arguing about it?

Verbal scale: always, usually, sometimes, never.

The wording was adapted for the parents' survey.

The second item was dropped when it was found to correlate only weakly with the other items, especially in the young person's survey, probably because it was not well understood.

CONSTRUCTION OF SCALES

The items on each scale were assigned scores (e.g. from 0 to 3) and the scores summed to produce separate values for parents and young people. A composite score was then computed, which equally balanced the scores of parent and young person. Where the parent's responses were not available, the composite measure was based on the young person's responses alone. Although the response rate was high on the survey of parents, there were for example 3,255 valid responses on parental monitoring for parents, compared with 4,098 for young people.

DELINQUENCY (a count of the occasions on which the young person engaged in the following)

1. fare dodging
2. shoplifting
3. noisy or cheeky in public
4. joyriding*
5. theft at school
6. carrying a weapon*
7. writing or spraying graffiti
8. damage to property*
9. housebreaking*
10. robbery (theft with force or threats)*
11. theft from home
12. fire-raising*
13. assault
14. car-breaking*
15. truancy
16. harming animals
17. selling drugs
18. racial abuse

*Items included in the measure of 'serious delinquency'. These are the items rated as most serious by respondents at sweep 2. All 18 items are included in the measure of 'broad delinquency'.

Table 1: Correlations between broad delinquency and eight dimensions of parenting or family functioning: sweep 4, age 15

Correlation coefficients (Spearman's rho)

	Correlation with broad delinquency			Correlation between
	Child	Parent	Composite	Child & parent
Monitoring	-.482	-.332	-.509	.303
Trust/autonomy	-.064	-.195	-.125	.286
Parent/child conflict	.338	.269	.361	.313
Time together	-.297	-.152	-.297	.197
Disclosure	-.407	-.341	-.450	.307
Parental punishment	.239	.314	.287	.323
Negotiation	-.242	-.184	-.268	.238
Consistency	-.336	-.169	-.315	.233

Note: N for each cell varies slightly, but is approximately 4,000. All coefficients are significant at better than the 99.9% level of confidence.

The right-hand column of Table 1 shows that the child and parent measures of each dimension were clearly correlated with each other, but the correlation coefficients were not high given that each pair of measures focused on the same construct and used mostly identical items. This shows that the children's and parents' perspectives on relationships and family processes were substantially different. It may also indicate that there were problems in getting truthful answers to these questions, particularly from parents, who have a stake in claiming that they deal with their children effectively.

The first two columns show that most of these dimensions of parenting and family functioning were quite strongly associated with delinquency in the child. With two exceptions (trust/autonomy and parental punishment) the child-based measure was more strongly related to delinquency than the parent-based measure. Of course, the measure of (self-reported) delinquency came from the young person; probably it correlated more highly with the child-based than parent-based measures of parenting because in this case the same observer was reporting on both delinquency and family process. In fact, the survey of parents also provided a simplified measure of the young person's delinquency from the parent's perspective, based on the same items of behaviour. This parent-based measure of delinquency correlated more closely with the parent-based measures of family process than with the child-based measures, confirming that the key factor is whether the correlated measures come from the same observer.

Why the measure of trust/autonomy goes against the usual pattern is unknown: in this case the parent's view appears to be more insightful than the child's: the parent's but not the child's assessment of parental trust was related to lower delinquency. The other exception to the usual pattern, the level of punishment, is a special case, since here the parent-based measure was substantially different from the child-based measure. This was

because we were able to ask parents whether they shouted at their children, hit them, or locked them out of the house, whereas we could not ask the young people the same questions because of ethical problems. For this reason, the parent-based measure was substantially stronger than the child-based measure, and hence correlated more strongly with delinquency.

With one minor exception, the composite measures were more strongly correlated with delinquency than either the child-based or parent-based measures individually. This suggests that the strongest measures of family process are those that balance the perspectives of the participants. Accordingly, the following analysis will rely chiefly on the composite measures. The simple correlations show that parental monitoring and child disclosure were the dimensions most strongly related to delinquency. This confirms the findings from much previous research, which has shown that parents tend to control their children if they know where they are, who they are with, and when they will be home. At the same time, the dual importance of parental monitoring and child disclosure confirms the recent results of Kerr and Stattin (2000), who found that parental monitoring is dependent on voluntary disclosure of information by the child. The correlations with the composite measures also show that parent/child conflict and parental punishment are associated with higher delinquency, and that parental consistency, negotiation to resolve conflict, and time spent in joint activities, are associated with lower delinquency. The one dimension that was only weakly related to delinquency is the parent trusting or granting autonomy to the child. However, the parent-based measure of trust/autonomy was more strongly related to delinquency than the composite measure (and much more strongly than the child-based measure).

This pattern of relationships fits very well with Patterson's social learning model of parenting (Patterson et al., 1992). In particular, the findings underline the importance of consistency and 'following through', negotiating from a position of strength, and avoiding long-term conflict, and they confirm that high levels of punishment are associated with bad, not good, behaviour.

Table 2: Correlations between eight dimensions of parenting and delinquency and substance use: sweep 4, age 15

Correlation coefficients (Spearman's rho)

Composite parent/child measure of	Broad delinquency	Serious delinquency	Smoking	Alcohol	Illicit drugs
Monitoring	-.509	-.381	-.338	-.382	-.341
Trust/autonomy	-.125	-.118	-.071	*-.044	** .005
Parent/child conflict	.361	.242	.300	.267	.213
Time together	-.297	-.237	-.211	-.205	-.200
Disclosure	-.450	-.350	-.312	-.313	-.279
Parental punishment	.287	.193	.209	.166	.129
Negotiation	-.268	-.175	-.145	-.161	-.116
Consistency	-.315	-.218	-.227	-.262	-.171

*Significant at the 99.5% level of confidence

**Not significant

Note: all other coefficients are significant at more than the 99.9% level of confidence.

Table 2 shows the correlations between the composite measures of family process and a measure of serious delinquency, alongside the correlations with broad delinquency that were shown in the previous table. It also shows the correlations with smoking, use of alcohol, and use of illicit drugs (using frequency measures in each case). The patterns of results for broad and serious delinquency are quite similar, but all of the correlations are lower for serious delinquency. This illustrates a general finding from the Edinburgh Study: that broad delinquency is more successfully explained than serious delinquency by the social and attitudinal measures included in this research programme. Smoking, use of alcohol, and use of illicit drugs are all related to different aspects of parenting in a similar way to serious delinquency. For all three kinds of substance use, the correlations are considerably lower than for broad delinquency. Underlying these patterns are high correlations of around .5 between each kind of substance use and broad delinquency. These findings mean that substance use at the age of 15 is essentially a form of deviant behaviour, which is therefore related to parental controls in a similar way to a broader measure of delinquency. The higher correlations for broad delinquency (as compared with substance use) arise because the 18-item scale of delinquency is a far more robust measure than use of a single substance such as cigarettes or alcohol.

A LONGITUDINAL ANALYSIS OF PARENTING AND DELINQUENCY

The first section has described the associations at a single point in time between dimensions of parenting or family functioning and delinquency. A problem with that type of analysis is that the young person's behaviour influences the approach taken by the parent, while at the same time the style of parenting influences the young person's behaviour. For example, we have found that a higher level of punishment by the parent is associated with a higher level of delinquent behaviour on the part of the child. This could indicate that when young people behave badly, they are more likely to be punished. However, it could also mean that parental punishment tends to make matters worse. By making use of the longitudinal design of the Edinburgh Study, we can generate more powerful evidence about the sequence of cause and effect. For example, we can use evidence about the style of parenting at sweep 2 to explain the level of the child's delinquency two years later, at sweep 4. Compared with cross-sectional analysis, this provides much stronger evidence on the influence of parenting, because the outcome (delinquent behaviour) comes two years later than the family process described. A remaining limitation is that there are many repeated cycles of interaction between parent and child over a two-year period. We are not able to describe the whole dynamic process of repeated interactions. The best that we can do is to compare a description of family process at an earlier time with delinquency at a later time, without modelling the sequence of complex interactions in between.

The regression model (Table 3) shows the effect of each dimension of parenting at sweep 2 (and of gender and social class) on delinquency at sweep 4. (For further details of the statistical modelling procedure, see Appendix 1.) The model shows that parental monitoring at sweep 2 reduced delinquency two years later at sweep 4, whereas parent/child conflict and parental punishment both increased later delinquency. All three effects were statistically significant at a very high level of confidence, but the effect of monitoring was the strongest: monitoring had twice the effect of parent/child conflict, and three times the effect of parental punishment. Trust or autonomy afforded the child had no significant effect on later delinquency. The model shows significant effects of gender and social class, and the estimates of the effects of parenting take account of these other background factors. After allowing for the parenting processes, sweep 4 broad delinquency remained higher among boys than girls, and higher among the manual than non-manual group.

Table 3: Ordinal regression model: outcome, broad delinquency at sweep 4

Family process at sweep 2	Standardized estimate	Standard error	Significance
Sex: male [†]	0.35	0.08	0.000
Social class: manual/unemployed [†]	0.61	0.09	0.000
Monitoring	-0.61	0.05	0.000
Trust/autonomy	Dropped		NS
Parent/child conflict	0.34	0.04	0.000
Parental punishment	0.19	0.05	0.000
Male*manual	-0.29	0.13	0.024
Manual*parental monitoring	0.17	0.07	0.010
Manual*parental punishment	-0.15	0.07	0.024
Parental monitoring*parent/child conflict	0.08	0.03	0.009
Parent/child conflict*parental punishment	-0.06	0.03	0.017

[†]Categorical variable: estimate applies to the named category

Various interactions between the variables complicate the picture to a certain extent. In general, parental monitoring reduced later delinquency, whereas parental punishment increased later delinquency, but both of these effects were weaker for the manual group. These findings imply that the social learning model of effective parenting works less well with working class than with middle class families. Also, parental monitoring was less effective in reducing delinquency to the extent that there was conflict between parent and child. This implies that the social learning model of effective parenting works less well where relationships are already poor. However, these and other interactions between variables are smaller than the main effects, and do not radically affect the general picture.

In broad terms, the results of this longitudinal analysis confirm that styles of parenting do have an effect on later delinquency. They are consistent with the social learning model of effective parenting, which stresses the need to track and monitor behaviour, and to apply rules consistently rather than punish freely. They do however suggest that this model may be more difficult to apply in families with limited material resources where delinquency is most likely.

A MULTIVARIATE ANALYSIS OF PARENTING AND DELINQUENCY AT SWEEP 4

Available at sweep 4 were detailed and robust measures of family functioning, which balance the views of parents and their teenage children. Making use of this rich information, a multivariate analysis was carried out to investigate the links between family functioning and broad delinquency at the same point in time. (For further technical details, see Appendix 1.)

Of the eight dimensions of parenting measured by questions in both the young person's questionnaire and the parents' survey, seven were independently related to the level of broad delinquency of the young person at age 15 (see table 4). The exception was trust/autonomy, which was not significantly related to delinquency in the context of the other variables, and this is consistent with the findings of the longitudinal model described in the last section. In general, the pattern of findings fits very well with the social learning theory of effective parenting. Parental monitoring, which was associated with lower delinquency, had the strongest effect. Disclosure of information by the child, which makes monitoring more effective, was also strongly related to lower delinquency. As predicted by the social learning theory, parental consistency was also related to lower delinquency, whereas parent/child conflict and punishment were related to higher delinquency. Time spent by parent and child in joint activities was related to lower delinquency, although this effect was rather weak, compared with the effects of other variables. Although there was a correlation between negotiation and lower delinquency (see Table 2) this relationship did not hold in the context of the multivariate model. Instead, negotiation was weakly related to *higher* delinquency in the context of the other variables. This is the one finding that goes against the social learning theory.

Table 4: Effects of parenting at sweep 4 on broad delinquency at the same sweep: estimates from an ordinal regression model

Composite parent/child measures of family process at sweep 4	Standardized estimate	Standard error	Significance
Sex: male	0.45	0.08	0.000
Social class: manual/unemployed	0.52	0.09	0.000
Monitoring	-0.80	0.05	0.000
Trust/autonomy	Dropped		NS
Parent/child conflict	0.24	0.04	0.000
Time together	-0.12	0.04	0.003
Disclosure	-0.36	0.06	0.000
Parental punishment	0.32	0.05	0.000
Negotiation	0.09	0.04	0.021
Consistency	-0.25	0.05	0.000
Male*manual	-0.36	0.13	0.004
Male*disclosure	-0.19	0.07	0.007
Male*consistency	0.17	0.07	0.015
Manual*disclosure	0.24	0.07	0.000
Monitoring*disclosure	-0.21	0.03	0.000
Trust/autonomy*punishment	0.13	0.03	0.000
Time together*consistency	0.11	0.03	0.001
Punishment*consistency	0.11	0.04	0.002

After allowing for the effect of the parenting variables, broad delinquency was higher among boys than girls, and higher among young people from manual than non-manual backgrounds. Interactions between some pairs of variables complicate the picture to some extent. Both parental monitoring and child disclosure were independently related to lower delinquency, but in addition, where parental monitoring was combined with disclosure of information by the child, there was a further reduction in delinquency, and this effect was fairly strong. This supports Kerr and Stattin's (2002) theory that parental monitoring combines with voluntary disclosure of information by the child to have its full effect. Child disclosure reduced delinquency more in boys than in girls, whereas parental consistency had a stronger effect in girls than boys. Child disclosure was more strongly related to lower delinquency in non-manual than in manual families. The last three rows of the table show the effects of further interactions between dimensions of parenting that seem hard to interpret, but these effects, although clearly significant, were fairly weak.

In summary, these findings from sweep 4 based on a more detailed description of family functioning lend strong support to Patterson's social learning theory of effective parenting. The one surprise is that parental willingness to negotiate with the child, although correlated with lower delinquency, was not independently related to lower delinquency after taking account of the effects of the other variables. These findings show that effective parents are considerably more likely to negotiate than ineffective ones, but this tendency to negotiate is a function of other practices such as spending more time with the

child in joint activities, and avoiding arguments, and these other practices are the ones that are directly related to lower delinquency.

Further analysis, which cannot be reported in detail here, has shown that particular styles of parenting have rather different effects on delinquency, depending on the kind of neighbourhood where the family lives. Table 4 above shows that parent/child conflict and parental punishment are related to higher delinquency, whereas parental monitoring is related to lower delinquency. A further model shows that all of these relationships are reduced in deprived neighbourhoods. In other words, for families in deprived neighbourhoods, parental monitoring and avoiding excessive punishment and conflict are less effective in controlling delinquency than in more advantaged neighbourhoods. Unfortunately, this suggests that the social learning model of effective parenting, although generally valid, works least well in the deprived neighbourhoods where it is most needed.

CONCLUSIONS

This analysis of the Edinburgh Study findings has shown that parenting has powerful effects on the behaviour of teenagers. The most convincing demonstration of this conclusion is that measures of parent/child relationships at sweep 2, when the child was aged 13, strongly predicted rates of delinquency two years later. Of course, a complex pattern of influences continually runs backwards and forwards between parents and children. Nevertheless, by predicting later delinquency from earlier parenting behaviour, we have demonstrated that there is a causal arrow pointing from parents' behaviour to delinquent behaviour in the child.

The findings have also illustrated the complexity of parent/child relationships and their effects on later behaviour. Seven dimensions of parenting were shown to have effects on child behaviour independently of one another. These aspects of parenting were also shown to combine with each other and with gender and social class to produce further, complex patterns. Nevertheless, most of this complexity can be understood and explained by a relatively simple social learning theory of parenting and child development. The key idea is that children will repeat patterns of behaviour that reward them in the short term. Effective parents avoid a downward spiral into coercive and disordered behaviour by establishing clear rules and expectations, tracking and monitoring behaviour, and consistently declining to reward behaviour that breaks the rules. From a position of strength, they are relaxed enough to allow frequently renewed discussion and negotiation about the rules. Ineffective parents are typically indulgent, harsh, inconsistent, and in conflict with their children, and often allow them to get what they want by breaking rules.

In keeping with this social learning theory, the analysis has shown that parental monitoring, consistency, and willingness to negotiate are associated with lower delinquency, whereas parent/child conflict and parental punishment are associated with higher delinquency. At the same time, monitoring cannot be externally imposed in authoritarian style, because it is dependent on voluntary disclosure of information by the child, and this point was demonstrated by the pattern of findings. Although willingness to negotiate was not independently associated with lower delinquency, effective parents were considerably more likely to negotiate than others, probably because negotiation was associated with other effective parental styles, such as spending time with the child in joint activities.

These findings from the Edinburgh Study therefore reinforce earlier research in showing that effective parenting leads to lower delinquency, and fit with a well-articulated theory that explains what kind of parenting is most effective, and why. This focuses attention on improving parenting skills as a possible means of reducing crime.

There is wide scope for programmes of training in parenting skills, and a demand may develop as such programmes become available. Although some may resist such a development, there could be important benefits in becoming more explicit, articulate, and critically aware about parenting, instead of treating it as a set of folkways that are unconsciously adopted and adapted from the last generation. At the same time, there are a number of problems and limitations to be borne in mind. First, parenting education will

gain acceptance only if it is seen to fit with the wider culture and to provide a broad range of benefits: among these, crime prevention would be only a minor aspect. Second, if the state steps in to organize and encourage parenting education, it will be invading space that was previously occupied by the churches, by private bodies and informal associations, and by community networks and extended families. That raises deep questions about the role of the state that would need to be thought through. Third, parenting classes will probably be attended by the most effective parents, not by the least effective parents who need them most. Similarly, reasonably competent parents can probably improve their skills fairly easily, but ineffective parents often do badly for deep-seated reasons that would be very hard to change. For example, the self-control needed to achieve consistency can only grow out of deep-seated self-confidence. Fourth, family functioning is strongly influenced by the social setting: it will always be much more difficult for people in poverty and in deprived neighbourhoods to become good parents, especially if relationships with their children are already poor.

Two other possibilities have been suggested. The first is that families at risk should be targeted by intensive parental education programmes, preferably when their children are very young. There is in fact good evidence that programmes of pre-school education combined with parent and child education can have beneficial effects on children in the long run as they grow up: benefits include educational success, lower rates of unemployment, and lower risk of arrest. These benefits have to be weighed against the political and social costs incurred by targeting and possibly stigmatizing small at-risk sections of the population.

Finally, there is the policy of serving ‘parenting orders’ on parents of children in trouble, which require them to take more responsibility for their children’s behaviour. Whether or not this can work is an open question. The findings presented here demonstrate that parents have a major influence on their children’s behaviour. It does not follow, unfortunately, that measures like parenting orders can cause them to be more effective. If anything, the present findings provide grounds for scepticism on that score. The findings suggest that most parents who are ineffective fail because, for deep-seated reasons, they lack parenting skills that are hard to learn. Also, they illustrate that effective parenting emerges out of close interactions and from strong and warm relationships, which cannot of course be established by parenting orders.

In short, these findings underline the importance of parenting on the development of delinquency in children. There may be opportunities for public policy here, but there are important limitations in what the state can do to encourage better parenting, and on the likely impact of such policies in reducing crime.

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APPENDIX 1

Details of the regression models

(a) Longitudinal model shown in Table 3

The longitudinal analysis made use of the four child-based measures of parenting that were available from sweep 2. Composite measures that balance the child's and parent's views were not available, because the survey of parents was not carried out until sweep 4. The range of dimensions covered was considerably smaller than at sweep 4, when parenting was made a particular focus. However, the four child-based measures included at sweep 2 were closely similar to the corresponding measures at sweep 4. Two other independent variables were included in the analysis: gender, and social class. A highly simplified measure of social class was used, which divides families into those in manual occupations and unemployed or dependent on state benefits; and those in non-manual occupations. The information on social class was gleaned from the survey of parents (the most reliable source, when available) or otherwise from the young person's questionnaire at sweep 2. The form of the analysis was a regression, in which the explanatory variables (four parenting measures at sweep 2, sex, and social class) were used to predict broad delinquency at sweep 4. Because the outcome or dependent variable, broad delinquency, is extremely skewed (with many zeros, and a long tail of high values) more usual techniques such as multiple regression are not appropriate. Instead, ordinal regression was used. Respondents were divided into five ordered categories from high to low level of broad delinquency (using a volume measure) and the regression model aimed to predict which category an individual would be in at sweep 4.

The model estimated the effect of each dimension of parenting at sweep 2, and of sex and social class, on delinquency at sweep 4. These estimates describe the *independent* effect of each variable, that is, after taking account of the other variables in the model. In addition, the modelling procedure assessed the possible effects of interactions between each pair of variables, although few interactions were found to be significant. All of the variables and interactions between pairs of variables were entered into the model at the first stage; then terms that were not significant were dropped, until the final model was produced. The estimates for the explanatory variables in the final model are shown in Table 3. Coefficients for the continuous variables (all except gender and social class) are standardized, and may therefore be directly compared.

b) Contemporaneous model shown in Table 4

More detailed and robust measures of parenting and family process were available at sweep 4 than at sweep 2, both because the questioning on the topic was expanded, and because the survey of parents was carried out at that time. Making use of this richer information, a multivariate analysis was carried out to investigate the links between family functioning and delinquency at the same point in time, when the young people were aged 15. Ordinal regression was used as before, with self-reported delinquency at sweep 4 (the broad measure) as the outcome or dependent variable. This time, the composite parent/child measures of family functioning were the explanatory variables, along with sex and social class. All of the 45 interactions between pairs of variables were tested, but

only a few were found to be significant. The estimates for the explanatory variables in the final model are shown in Table 4. Coefficients for the continuous variables (all except gender and social class) were standardized, and may therefore be directly compared. These estimates show the net effect of each aspect of parenting, after allowing for the effects of the other parenting variables and the background factors of sex and social class.

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