

5 Risk/protective factors for offending with particular reference to deprivation*

I. Kolvin, F. J. W. Miller, M. Fleeting and P. A. Kolvin

Introduction

In this chapter we describe the use of longitudinal data to explore early risk and protective factors for later offending. This theme had its origins in observations arising from other research that many youths from 'high-risk' backgrounds do not become delinquent and a small proportion of youths from 'low-risk' backgrounds do. We sought to highlight factors that allowed us to discriminate between such youths.

A number of approaches were considered. First, there is the biographical anecdotal approach whereby a small number of families are studied at considerable depth so as to provide information about possible protective and risk factors. Unfortunately our data lacked the quality of clinical case records and therefore could not be used as a source of information and insights (as used, for example, by Coffield *et al.*, 1981).

Second, we were tempted to move directly into multiple regression analyses, using a diversity of explanatory variables in order to seek significant predictors, but for good reasons we decided there was no virtue in rushing into this. Multiple regression gives information about significant predictors, irrespective of risk or protection, and this is likely to give rise to the banal conclusion that protection is merely the flip side of risk. The results of prediction analysis (based on prediction coefficients) may be dependent on a relatively small subgroup of individuals lying at the extreme of multi-problem behaviour, but the prediction model itself does not give much idea about the details of such subgroups. However, it does allow a view of the relative importance of predictors within a specified prediction set.

Finally, some of the factors appeared to operate at different stages of development and hence path analysis appeared a more appropriate model, but at this early stage it was not clear which variables should have been included.

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We therefore decided on a four-stage approach. The first established operational definitions of deprivation and of offending. The second did the same for other stress factors. These included social, family, personal and biological factors. Thirdly, we had to consider how to reorganize and analyse our data in order to obtain a better understanding of the extent to which these factors influenced risk and of the possible mechanisms involved. This was a flexible approach that allowed an exploration of variations in outcome, escape from risk and also heterogeneity of outcome in relation to similar orders of risk. In this sense the method is quasi-experimental. Fourth, we complemented the above with appropriate multivariate analyses.

Background

The Newcastle Thousand Family Study began in 1947 and continued until 1962 when the children were 15 years of age. The data on these families had been preserved and, using a 'catch-up' longitudinal design, it proved possible to examine whether boys who grew up in deprived families were more at risk for offences in later childhood and adulthood than those from families who did not experience deprivation.

In 1978-80, we were granted access to the relevant criminal records for the 847 families in the study in 1952; the results provide the material for this report. There are good reasons for the focus on the 847 families. When the children of these families were in their fifth year, extensive social data were collected which proved crucial to the definition of deprivation. For this reason the fifth-year cohort of 847 families constitutes our baseline for the research into deprivation and criminality. Further, only attrition from this baseline is of consequence to the findings reported here.

Concept of deprivation

Our method demanded that we identify cardinal criteria of deprivation. Briefly the criteria were determined by the range of social and family information available in the archives and by theoretical views about their relevance. In other words we had to rely on concepts and measures adopted by research workers thirty years earlier. We first explored the data (Miller *et al.*, 1960) for features representing deprivation. We then grouped those features that reflected similar concepts of deprivation; this gave rise to six clusters. We went on to examine the frequency of features and also their intercorrelation within clusters, and on this basis we selected six features representative of each broad area of deprivation that constituted our cardinal criteria. We assumed that each of the criteria had the same value and confirmed that it was reasonable to sum the scores of

deprivation by subjecting the data to principal components analysis. Naturally, adverse family factors are not confined to these cardinal criteria.

In 1952 the main areas of deprivation in the families were:

1 Family/marital instability	14.5%
2 Parental illness	12.2%
3 Poor care of children and homes	12.7%
4 Social dependence (families dependent upon state or community subsistence)	17.5%
5 Housing (overcrowding, as defined by the Housing Act 1936)	18.7%
6 Poor mothering	15.1%

All families were given a score of zero or one on each of the above six criteria and their scores were added to give a total deprivation rating. The percentage of families affected ranged from 12% to 19%

Choice of samples

The next step was to identify all the families with evidence of 'deprivation' in any of these six areas at five years of age. From the records, it was found that of the 847 families then present in the survey, 482 (57%) were not deprived in any respect, 365 (43%) were deprived on at least one criterion, and 116 (14%) were deprived on at least three criteria.

Subsamples were then isolated for special study with three main objectives. First, the basic aim of the research was to compare a sample that was representative of *all* the deprived families with a sample in which there was no evidence of deprivation. Second, we examined the effect of each type of deprivation separately. The subsamples consisted of the following:

- 1 Not deprived: families in which there was no evidence of deprivation (57%).
- 2 Deprived group: families deprived in at least one respect (43%). This sample includes the multiply deprived.
- 3 Multiply deprived: families deprived in at least three respects (14%).

The above selection is based on the use of the cardinal defining criteria of deprivation outlined above. A distinction needs to be made between the defining criteria and associated criteria. For instance, overcrowding and unemployment contributed to the defining criteria, whereas father in an unskilled job did not. However, being categorized as deprived does not prevent within-group variation on other measures of social dysfunction.

Rates of offending

In this chapter, we combine evidence about offending from two sources – the archives of the Thousand Family Study and information about

Table 1 *Deprivation and offending: per cent of men from deprived families who offend*

	Marital disturb- ance	Parental illness	Poor physical care	Social depend- ency	Over- crowding	Poor mothering
	% offend N ing	% offend N ing	% offend N ing	% offend N ing	% offend N ing	% offend N ing
Specified deprivation alone	21 38	12 17	4 50	12 33	30 27	11 18
Specified deprivation plus one other deprivation	14 36	16 25	11 73	22 36	16 75	19 58
Specified deprivation plus two or more other deprivations	25 60	25 68	39 59	39 68	36 64	40 65
Total	60	53	54	73	82	70

Note: Not corrected for attrition.

criminality available from official criminal records (Home Office data) until the individuals were 33 years of age (Kolvin *et al.*, 1988a, b). Prior to the minimum school-leaving age of that period 83 persons offended, and of these, three-quarters went on to commit further offences after that age. In addition, a further 66 individuals acquired a criminal record for the first time after the age of 15. This gives a total of 149 persons who had offended at some time up to the age of 33. At all ages, offences were overwhelmingly committed by males. By the age of 33, more than one in every four males had offended, but only about one in twenty females. The rate of 31% of the general population for male criminality is surprisingly robust. It is similar to the rate reported for an inner London area (West, 1982) and in a national survey (Home Office, 1985).

Relationship between deprivation and offending

Two basic questions were asked. First, does coming from a deprived background give rise to a higher rate of offending? The proportion of males who offended varied according to the degree of deprivation, ranging from one in six males from non-deprived families, to over six in ten males from multiply deprived families. The answer is 'yes' and, furthermore, offending appears to be closely related to the degree of deprivation.

The second question is whether a single criterion of deprivation, when it occurs truly in isolation, carries a greater risk of offending than when there is no deprivation? Such circumstances are rare but it will be noted (see Table 1) that when a specified deprivation was present on its own, the

Table 2 Combinations of major deprivations and offending (men only)

	1 Poor physical care or mothering		2 Social, i.e. overcrowding or social dependency		3 Marital disruption	
	N	%	N	%	N	%
Alone	27	41	61	34	23	35
Plus 1	—	—	36	64	9	66
Plus 2	36	64	—	—	15	33
Plus 3	9	66	15	33	—	—

Note: Not corrected for attrition.

rates of subsequent offending varied little from the rate (17.7%) in those families with no deprivation (with the exception of marital disturbance and possibly social dependence).

When a specified deprivation coexisted with one other criterion in the same family, the rate of offending varied from 25% to 75%. When it coexisted with two or more other deprivations, the rate varied from 59% to 68%. Pooling data gives rates of 29% for one criterion alone, 69% for two and 66% for three.

Parental illness, when on its own or combined with any one other deprivation, appeared to carry the lowest risk. Our other analyses also suggested that parental illness has the lowest effect on many different types of outcome (Kolvin *et al.*, 1988b). The rest of the table merely reveals what has already been demonstrated, namely that the more deprivations there are coexisting in the family, the higher the rate of subsequent offending.

We examined this hypothesis further by ascertaining the effects of combinations of the cardinal deprivations. For these purposes, we devised three major deprivation indices to reflect:

- 1 Poor mothering (to reflect both poor physical care and poor mothering).
- 2 Adverse social influences (as reflected by dependence on social welfare and overcrowding).
- 3 Marital disruption.

The rates of offending in males brought up in families where each of these deprivations existed on their own was roughly similar (see Table 2). However, poor mothering, when combined with the other deprivations, appears to exert the most powerful effect.

Continuities and discontinuities of risk factors

So far, deprivation has been examined as if it were a static phenomenon, but family deprivation fluctuates over time. This gives rise to the question

Table 3 *The offence rates of men whose families moved in and out of deprivation*

	Family never deprived	Family moving into deprivation (1952-7)	Family moving out of deprivation (1952-7)	Family always deprived
N	207	19	92	84
Offending %	16	26	32	54

Note: Not corrected for attrition.

of whether an increase in family deprivation over time (e.g. 1952 to 1957) increases the risk of offending and, conversely, whether a reduction of family deprivation acts as a protective factor in relation to offending. To examine this question, the families were divided into those who were never deprived, those who moved into deprivation over that period, those who moved out of deprivation, and those who were deprived in both 1952 and 1957. The data in Table 3 suggest that if the family moves into deprivation, there is a 50% increase in the rate of offending. If the family moves out of deprivation, there is a 40% decrease in the rate of offending.

Exploring the importance of risk and protective factors

For the purpose of exploring these notions we divided our cohort into subgroups (see Figure 1). First, in the non-deprived group we tried to identify features that discriminate between individuals who do and those who do not become delinquent; these are the stress factors. Secondly, in the deprived group, we sought factors to explain the resilience of certain of its members; these are the protective factors. An important question was whether protective factors operated across the spectrum of deprivation. We also tried to determine whether these two kinds of factor operated in a similar way in both boys and girls. Unfortunately the low incidence of female delinquency confined us to a study of protective factors and we have not been able to study sex differences in vulnerability to stress. Finally, we tried to discover if these factors remained potent over time (Werner, 1985) or changed in significance as the child developed. For these purposes data were drawn from the children's records at 5, 11 and 15 years.

The first five years

Stress factors. By the age of five a small number of factors that tolled the bell of later delinquency had already emerged in the non-deprived group. The main ones were a relative reduction in personal territory (40% of eventual delinquents in this group had experienced less personal 'space' as against 18% of non-delinquents), mother's young age at her first

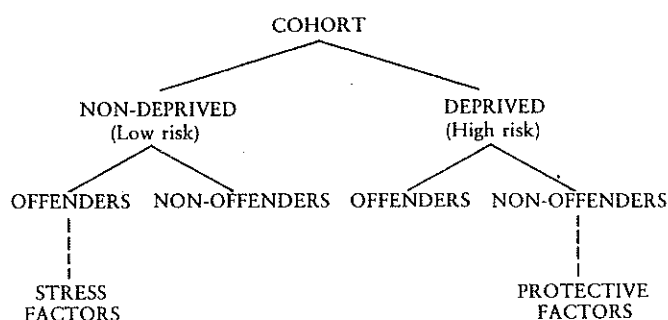


Figure 1 Flow chart of method. For girls, protective factors only studied; for boys, stress and protective factors studied

marriage (29% as against 11%), and the breadwinner being in semi-skilled/unskilled work or unemployed (33% as against 18%). An ancillary factor was relatively poor physical growth at the age of three.

Protective factors. The absence of specific deprivations against a background of general deprivations (as reflected by less overcrowding and smaller family size perhaps giving rise to greater living and elbow space) proved to be an important protector. In addition, only 46% of delinquents in the deprived group as against 68% of non-delinquents had had the benefit of good mothering, of good maternal health (68% as to 82%), of being well mothered in a good home (76% as to 93%), or of employment of the breadwinner (60% as to 77%). Being elder-born appeared to mitigate the ill-effects of underprivilege: 49% of the deprived group who became delinquent had at least two elder siblings as opposed to 26% of those who remained crime-free. There was also an undeniable statistical link with good early physical development, the absence of a medical history, including the relative absence of neonatal complications, fewer hospital outpatient attendances and fewer accidents. Accidents and hospital outpatient visits seemed to operate only at the extremes of deprivation. All of these probably reflect a more favourable standard of child-rearing.

The protective factors identified by the age of five for females were fewer than for their male counterparts. A secure socio-economic status of the breadwinner appeared to act as a bulwark against criminal activity as did a healthy mother and an accident-free early childhood. All of these factors may in turn reflect better care of the child.

The tenth/eleventh year

Stress factors. By the age of 11 many more factors concerning a child's interaction with his social and school environment were measurable and the emergent stress factors seem to cover the whole range of the child's non-family activities.

The stress factors were of four main types: physical, temperamental, cognitive and attitudinal. It is not that factors that were striking at the age of five ceased to be significant; rather, other factors became predominant. School proved a veritable almanac of stress factors, with the scholastic underachiever who had a negative attitude to education most likely to fall foul of the law. Good concentration was more than three times as frequent among potential law abiders than among nascent delinquents. A similar pattern occurred with reliable behaviour in class. There was also a marked difference in abilities: 35% of the delinquent group had poor handwriting as against 20% of the non-delinquent group. Further, intelligence and educational achievements in the 'core' educational subjects diverged considerably between the groups. Even at this age, negative attitudes to education and authority were developing amongst the eventual delinquents: for instance, 62% of the eventual delinquent group were anti-police as against 35% of the non-delinquent group. Whether a symptom or cause of antisocial behaviour, this was startling as a statistic.

Protective factors. For those from high-risk backgrounds a respectable school career blunted the propensity to crime. The proportion of the non-delinquent deprived group who either performed well scholastically or concentrated in class, or showed persistence and reliability, or whose IQ was 100+, varied from between twice and five times that of the delinquent deprived group exhibiting these qualities. Only 10% of the deprived delinquent group had an IQ of 100+ as against 43% of the non-delinquents. Good parental supervision had an ameliorating effect: 28% of the delinquent group, but only 10% of the non-delinquent group, had been poorly supervised at this age. Finally, whereas 76% of deprived children who later stayed out of trouble belonged to youth clubs, only 55% of those who later offended were members. This suggests that identification with positive peer group activities gives some protection.

The effect of protective factors stood out even more starkly in the multiply deprived group, spectacularly so in the case of educational achievements during the 11+ examination, particularly with arithmetic, reading and spelling. Good behaviour and reliability ratings in the classroom were also moderately protective. The majority of those who stayed out of trouble were members of youth clubs (72%) compared with a minority (41%) of those who did not.

No less plain were the protective factors in females at this age. Of the eventual delinquents 28% experienced poor supervision as against 7% of the non-delinquents. In only 61% of the delinquent group was the natural father still present compared with 81% of non-delinquents. The future delinquent was also nearly twice as likely to be unreliable in the classroom and four times as likely as her non-delinquent contemporary to be unsociable.

The fifteenth year

As might be expected, school factors that operated *stressfully* at 11 continued to do so at 15, particularly poor intelligence, poor concentration, low persistence and a poor attitude to schoolwork. Not surprisingly, therefore, only 36% of the future delinquents expressed a desire to stay at school beyond the minimum leaving-age compared with 61% of the non-delinquents. What is more, the families' interest in maintaining contact with the school seemed to reflect their offsprings' achievements there: 83% of parents of the non-delinquents compared with 48% of the parents of delinquents. Only 32% of the delinquent group as against 61% of the non-delinquent group had fathers with an 'effective' personality (based on judgements which were reached by a team of doctors and community nurses who had known the family over 10 to 15 years). Of those from non-deprived homes who became or who were already delinquent 43% were missing at least one school day in ten, compared with only 13% of those who did not become delinquent; 59% of the delinquents as against 24% of the non-delinquents had a hostile attitude to school work. Furthermore, while only 45% of the delinquent group participated in family activities, 70% of the non-delinquent group did so.

A similar series of factors proved to be protective in the case of the deprived, and once again those factors that reflected a positive motivation and attitude in the deprived child (particularly willingness to continue at school, good school attendance and attitude to school work) were prominent discriminators. Only one-quarter of the delinquent group concentrated well in class, whereas over half of the non-delinquent group did so, a finding that suggests the protective effect of positive temperamental features. Good intelligence and educational achievements and a positive family interest were also powerful protectors. A few of these were also protective at the extremes of deprivation.

There was a smaller set of protective factors for girls; four of these overlapped with those applying to boys. They were good concentration and persistence in class, a non-hostile attitude to school, a willingness to stay on at school, and a family that maintained contact with the school. The constant presence of the natural father was a powerful protector; in the non-delinquent group 57% of fathers were always present as against 21% in the delinquent group. A new factor was good growth at thirteen years.

The effects of pairs of explanatory variables in predicting criminality in the family of formation

As risk factors do not operate in isolation, another question posed was whether there would be an independent main effect of each risk factor (a specific deprivation) after all other risk factors had been taken into

Table 4 Risk factors, IQ and criminality: loglinear analysis

	Explanatory variables	df	G	Significance
(N = 356)	RF1	1	12.23	$p < .01$
	IQ	1	18.89	$p < .01$
	(interaction)	1	2.86	ns
(N = 356)	RF2	1	6.01	$p < .05$
	IQ	1	23.80	$p < .01$
	(interaction)	1	2.12	ns
(N = 356)	RF3	1	5.54	$p < .05$
	IQ	1	30.27	$p < .01$
	(interaction)	1	0.63	ns
(N = 427)	RF1	1	22.06	$p < .01$
	RF2	1	9.09	$p < .01$
	RF3	1	3.36	ns
	(interactions)	4	2.27	ns
(N = 427)	RF1	1	24.48	$p < .01$
	RF2	1	10.33	$p < .01$
	(interaction)	1	0.02	ns
(N = 427)	RF1	1	33.25	$p < .01$
	RF3	1	4.61	$p < .05$
	(interaction)	1	0.02	ns
(N = 427)	RF2	1	20.28	$p < .01$
	RF3	1	5.78	$p < .05$
	(interaction)	1	2.79	ns

RF1 Defective care and/or poor mothering.

RF2 Overcrowding and/or social dependence.

RF3 Marital disruption.

IQ 0 = 100+, 1 = 99-.

ns Not significant.

The dependent variable is the proportion offending.

account. For these purposes, the pairs of risk factors were analysed formally using the technique of loglinear analysis. This gives an estimate of the independent effects of each of the explanatory variables and of any interaction between them. We used the same main deprivational explanatory variables described in the section on the relationship between deprivation and offending, with the data organized into categories. An additional explanatory variable employed was intelligence as measured at the age of 11 (comparing youths scoring 100 or more with those scoring 99 or less). The most powerful explanatory variable was IQ. Of the family risk factors, poor mothering showed the highest level of statistical significance; and when the three were put into the same analysis, marital disruption no longer had a significant effect. We had anticipated considerable statistical interaction between our risk factors but none occurred.

It is noteworthy that this last finding on marital disturbance seems to run counter to that in Table 1, where it was noted that of all the indices of deprivation, marital disturbance had one of the *greatest* effects when it

occurred in the absence of other deprivations. The contradiction arises because an independent effect after taking account of other variables is not synonymous with an effect in the absence of other variables (see Rutter, 1983). The implication is that marital disruption probably *is* a significant risk factor on its own but that (at least in the deprived sample we studied), when it is associated with several other deprivations, its effect tends to be swamped by the impact of multiple other adversities.

Mechanisms of operation of risk factors using path analysis

Finally, we wished to explore possible mechanisms using path analysis. One problem was how to select the variables of importance for this exercise. We decided to look at key early-life, social and family experiences to ascertain (a) if their effects were mediated through individual differences of intelligence and temperament (i.e. indirect influences); or (b) whether they operated directly; and (c) to see if an overall deprivation index masks the pattern of contribution of specific deprivation criteria (see Figures 2 and 3).

One of the major limitations of path analysis is that the causal path may account for a small proportion of the variance of subsequent dysfunction. There are many possible reasons for this, but we highlight those that strike us as important:

- 1 The insensitivity of the measures included as causal influences.
- 2 The use of measures which broadly reflect the same underlying construct, that is duplication of explanatory measures.

Heath (1981) wrote that many variables, such as marital disruption, overcrowding, poor health and unemployment, may add very little to the prediction if they are strongly correlated. Each new variable may produce only a small increment in explanatory power. To discover more about the unknown sources of variation we must add variables not correlated with those already included and preferably not correlated with each other. Further, it is often assumed that such independent variables are unrelated, but frequently there is much collinearity. Thus there are strong reasons for adding psychological and biological variables to the sociological ones.

We studied mechanisms using path models with a hypothesized network of specific causal associations. Intelligence was measured at the 11+ examination, and temperament was represented by an index of poor concentration and persistence in the early years of secondary school. (Figure 2A represents the proposed simplest model.) The unbroken lines represent causal links where the association between the two factors in question was significantly different from zero. The relevant coefficient is termed a path coefficient. The broken lines represent proposed paths that have been omitted as no significant causal associations emerged, and the proposed linkage therefore is implicitly set equal to zero. The curved lines

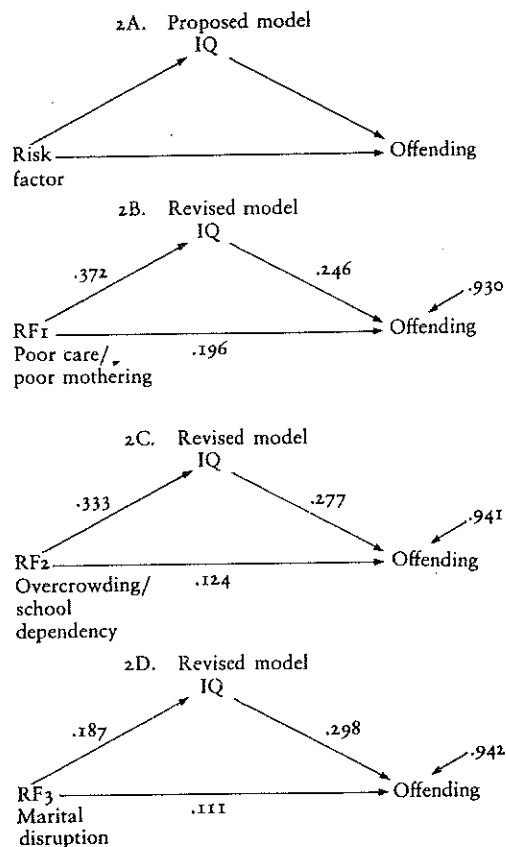


Figure 2 Risk factors, individual differences and criminality

represent simple non-causal correlations. More complex models may be erected but for the purposes of this paper simpler models have been proposed. Figures 2B, 2C and 2D suggest that all three of the main specified family risk factors have both direct and indirect influences on offending. In such a simple model, the explained variance never amounts to more than 16%.

Figure 3A represents a slightly more complex model. Figure 3B also suggests that the deprivation indeed has both direct and indirect influences on offending, but such an overall index may mask the pattern of contribution of the specific deprivational criteria. Figure 3C also suggests that poor mothering in the preschool years has a prior causal influence on measured intelligence and on temperament, and therefore a direct or indirect influence on criminality. The explained variance is 16%. The other two risk factors (see Figures 3D and 3E) have only indirect influences mediated by intelligence and temperament, and each of the causal models accounts for only 13% of the explained variance.

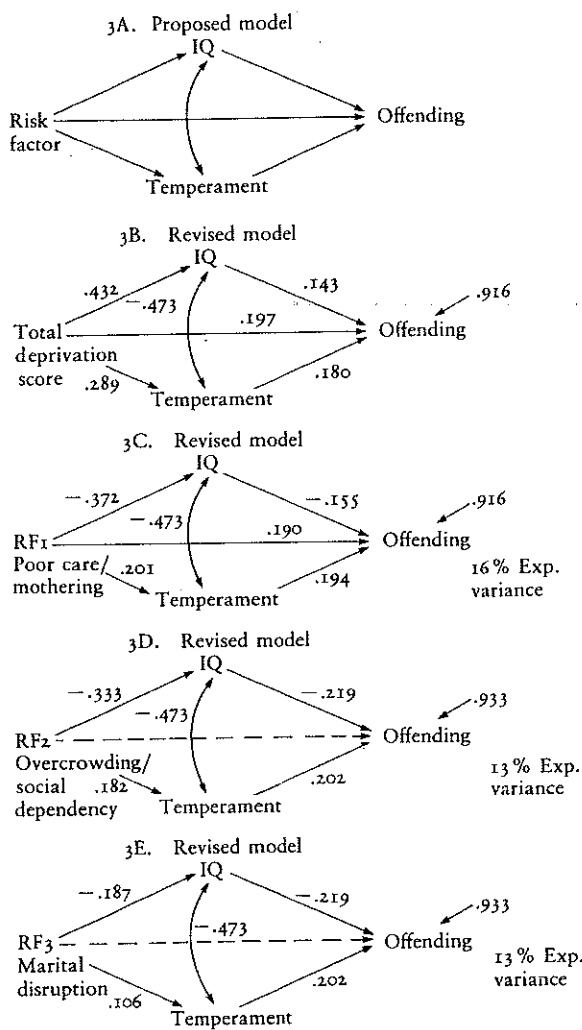


Figure 3 Risk factors and criminality

The path analysis employed in this study is based on linear multiple regression models, which assume that any interval data are normally distributed and that other data are measured on nominal or ordinal scales. In some respects our data fall short of such requirements. First, criminological data usually have a skewed distribution. While some authors claim that the path analysis technique is relatively robust in relation to violation of the normality assumption, and the inefficiencies incurred may be slight (Macdonald, 1976), caution is needed in interpreting the percentage of variance explained. Further, we converted our data on offending into a

categorical form despite the fact that the dichotomy gives rise to a loss of information and hence a loss of sensitivity.

Second, there were also questions of scaling. Most of our data were not recorded at an interval level of measurement but rather as binary or ordinal variables. What therefore is their status? Binary variables used as predictor variables in path analysis can be regarded as interval level variables (Macdonald, 1977). Furthermore, 'though technically improper, the use of ordinal variables in path models does not lead to disaster' (Macdonald, 1977, p. 95).

These qualifications about assumptions are important as the adoption of a purist view may mean loss of a powerful statistical tool for exploring the sequence of cause and effect. While we have not used a path model that is based on loglinear analysis, we have noted in other analyses that linear multiple regression techniques and loglinear analyses tend to give similar results. These similarities are probably a reflection of the general linear model underlying the two methods.

Discussion

In this study we tried to establish 'stress' factors associated with the occurrence of offences despite the absence of deprivation and also 'protective' factors associated with the absence of offences despite the presence of moderate or severe deprivation. Deprivation in our population was widespread. But deprivation in itself, while correlating highly with offending, was not a sufficient condition for its development. Other factors within the care-giving environment and in the children themselves appeared to be able to modify the influences of deprivation; in some situations these factors acted as mediating influences and in others as moderating ones.

These other influences have been categorized according to the three main periods in which the data were collected: roughly the preschool years, primary school and pre-adolescence and, finally, the adolescent school years. This allows pinpointing of factors associated with vulnerability in the non-deprived and resiliency in the face of major deprivational experiences.

In the first five years, the resilient, despite a background of some deprivation, were characterized by having good parental care, more positive social circumstances, and less adverse physical experiences in the perinatal period and early childhood. The vulnerable, despite a background without deprivation as we had defined it, were characterized by having some adverse social circumstances not sufficient to constitute deprivation but enough to act as stress, poor growth, which probably also reflects their poorer social circumstances and a greater number of accidents by the age of five.

In the pre-adolescent period, the resilient were characterized by five different kinds of protective factors: first, a care-giving environment that provides good supervision of children; second, the absence of developmental delays; third, relatively good cognitive development and educational achievements; fourth, positive temperamental qualities; and, finally, positive responses from peers and also social activities, such as membership of a youth club. The features that characterized the vulnerable (again despite a background without deprivation) relate to the children themselves, their poorer intelligence and achievements, their adverse temperamental qualities and behaviour in class, and their attitudes, rather than to aspects of their care-giving environment.

In adolescence, the factors associated with resilience proved to be similar to those in pre-adolescence, namely good cognitive development, scholastic progress and positive school factors. At this stage, we have to question the viability of the concepts of stress and protection, as the majority of the delinquents have actually already become delinquent. Nevertheless, the pattern of the factors identified in adolescence is similar to that in pre-adolescence and it is not unreasonable to think that many of the identified factors are merely continuations of the stress and protective influences of pre-adolescence. In addition, there were two important parent and family factors: family contact with the school and in girls the continuous presence of the natural father. The 'stress' factors associated with vulnerability were again similar to those in pre-adolescence. However, there were at this stage important family and parental factors: the family showed little interest in maintaining contact with the school; the youth did not participate in family activities; and, finally, the mother and father lacked effective personalities.

Are the above factors responsible for, or merely associated with, resilience in the face of deprivation, and vulnerability against a background of 'non-deprivation'? And how reliable are they as predictors?

Peer influences

It is often argued that delinquent activities may reflect the example set by friends with whom the potential delinquent associates. We examined the converse proposition that positive peer influences are associated with a decreased risk of delinquency in high-risk children. Taking the deprived group at 11 years of age, we found that whereas only 33% of youth club members were to become offenders, 54% of non-members would do so. While it is difficult to disentangle cause and effect, the above differences may be explicable not on the grounds of the positive effects of youth club membership, but on the basis that potentially delinquent youths choose delinquent friends, whereas non-delinquent youths seek more approved forms of recreation as provided in the youth club setting. Nevertheless, our findings do support the suggestion that beneficial social influences

were associated with protection from delinquency even in high-risk children.

Family factors

Long before children reach the age of criminal responsibility, data obtained from the home environment can be used to forecast later delinquency, at least as effectively as other predictors. For example, we found that of those deprived children receiving poor mothering before five years of age, 71% became delinquent, with only 39% of those receiving good care becoming delinquent. In other words, good parenting protects against the acquisition of a criminal record; the likely explanation is that good affectionate mothering is complementary to good physical care and supervision and it is not surprising that a similar pattern emerges. Research data often imply that the mechanism by which good care is translated into relatively good behaviour is simply that the caring parent had jurisdiction over the child's choice of friends and recreation, but given the early age at which the correlation emerges, the argument must be that good parental care and supervision is itself capable of giving rise to beneficial personal qualities (such as internal controls) that influence behaviour at a later stage.

'Good parenting' is by no means the only measure of a family's beneficial involvement in a child's development. Even for high-risk children, the probability of later delinquency was substantially reduced from 57% to 28% if the family wished to maintain contact with the school when the youths were aged 15.

Positive qualities of the father's behaviour appear to go some way towards nullifying the detrimental effects of a deprived background. In high-risk 15-year-olds, the presence of an 'effective' father decreased the probability of delinquency from around one-half to one-third, whereas among low-risk youths 'ineffective' fathers raised the probability from 11% to 28%. The same increased vulnerability was found in those youths who did not share or participate in family activities.

Social factors

Social stresses appear to have been operative in high-risk families even before the children were five. These included greater density of the home territory, the family breadwinner having low occupational status, and the mother being young when first married. The effects of these stresses taken individually is significant rather than startling, but their combined effects may be more substantial. However, households that were smaller and had 'older mothers and employed breadwinners' had a positive influence.

Childhood accidents

The word 'accident' carries many shades of meaning; at one extreme, it describes in neutral terms an occurrence that was not intentional. But the

term also encompasses 'negligence', as when the occurrence was occasioned by the child's carelessness, or by the parent's lack of foresight (possibly reflecting generally ineffective care and control).

In the absence of deprivation, accidents in the preschool years did not appear to be a stress factor. However, in the deprived group, a relative absence of accidents proved to be associated with resilience; it is reasonable to speculate that in the multiply deprived group accidents probably represented a combination of carelessness and ineffective care, or even abuse.

School factors

Much research has shown an association between dull intelligence and delinquency (Rutter and Giller, 1983). Our own data tend to bear out this proposition. In the high-risk group, 43% of those who did not become delinquent had IQs above 100, compared with 10% of those who did become delinquent. Only 18% of the high-risk group with arithmetical ability above the mean became delinquent, whereas 58% of those whose ability was below the mean did so. Results for ability in English were similar, but not so impressive. It seems sensible that positive attitudes to school, educational attainment and conduct in class should go hand in hand, but it is nevertheless noteworthy that positive temperamental and behavioural qualities in the classroom were strongly associated with reduced risk of delinquency, even among deprived, and therefore vulnerable, children. Only 17% of those vulnerable children who were described as having a good ability to concentrate in class at ten years of age went on to acquire a criminal record, but of those whose concentration was poor, over 45% became offenders. Conversely, low cognitive ability and scholastic achievements and poor temperamental and classroom attitudes in youths from non-deprived backgrounds appeared to render them more vulnerable. The great majority of these data were collected prior to the emergence of delinquency and this supports the notion that the sense of stability and esteem derived from meritorious school performance persists as a protective factor into later life (Rutter and Giller, 1983). Alternatively, of course, factors encouraging positive academic performance might in themselves be protective. The mechanisms are still far from clear. For example, is a distressing home atmosphere balanced by a fulfilling school career (Rutter, 1979), or does the teacher react favourably to the high-risk, yet intellectually able child, and elicit from him a positive identification with the teacher's own values? Because of the complexity of interactions, these theoretical speculations may be as near to the mark as any.

Male-female difference

We found only a few factors that protected females from delinquency and they differed from those in boys. In addition, at 15 years, protective factors were associated with a smaller decrease in risk of delinquency in

males than in females. In other words, not only are females less predisposed to delinquent acts, but they also have stronger shields to guard against the risks. At age five, the major protective factors in the deprived female groups were a father in skilled employment, a family not dependent on social welfare, an accident-free life, and a mother in good health. A girl with any one of these factors was between three and four times less likely to acquire a criminal record than a girl without them.

By the tenth year, the importance of parental care was evident in both males and females; only one in ten of the deprived youths who did not become delinquent were experiencing poor parental supervision, in contrast to one in four of those who did become delinquent. Among girls, the continuous presence of a natural father was also important. Good reliability in the classroom was protective for both boys and girls, and a good ability to socialize was protective for females but not for males.

At age 15 a greater number of protective factors emerged in females; not only did more of them overlap with male factors, but where they did, the protective element was as great or greater than in males. The overlapping factors mostly concerned scholastic ability and interest, and included level of concentration, attitude to schoolwork, willingness to continue at school, and interest of the family in maintaining contact with the school. Of course, by this stage, the majority of delinquents already have a criminal record, so that the presence of adverse attitudes may merely reflect an already acquired delinquent predisposition.

The same cannot, however, always be said of certain other factors, peculiar to girls, that are reflections not of attitude but of development. For example, good physical growth at age 13 was associated with an 8% delinquency rate, whereas poor growth portended a 63% rate; a wet bed at age five or later entailed a threefold increase in risk for later delinquency. Finally, more than half of the females who did not offend had fathers who were continually present over their preschool and school years, compared with only one in five of offenders. The mere presence of the natural father seems protective in females but presumably the quality of the fathering is also important (McCord, 1982).

Relationship of cardinal defining criteria and offending

There was an independent main effect of both poor mothering and adverse social circumstances, but whereas marital disturbance was a stress factor in its own right, it was not so in the presence of severe multiple deprivation. It seems that the effects of marital disturbance are mediated through a consequent poor quality of care and mothering, and through relatively impoverished social circumstances.

Discontinuities in family deprivation appear to give rise to a degree of protection; conversely, movement into deprivation in previously non-deprived families increases the vulnerability of their offspring to

offending. The risk of offending for males was three and a half times greater in males whose families showed a consistent pattern of deprivation than in those who were never deprived.

The association between deprivation and offending was almost always entirely mediated indirectly through a prior effect on IQ and temperament. This was not true for poor care and mothering, which had an additional significant direct effect.

There remains the question of the mechanisms of action of the intervening variables – are the effects of offending facilitated or ‘mediated’ by these variables? Or are the effects ‘moderated’ by these variables? Unfortunately path analysis cannot tease out which intervening variables act as mediators or moderators. In attempting to answer this question, less complex statistical analyses may prove more helpful.

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