

SERIOUSLY DISTURBED CHILDREN IN SPECIAL SETTINGS AND ORDINARY SCHOOLS

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Those of us who undertake psychotherapy with seriously disturbed children and adolescents have for long done so without clear evidence that our activities were backed by sound confirmatory research.

In this paper an attempt is made to compare and contrast the effectiveness of the special services which were available in the north-east of England for children suffering from more serious degrees of psychiatric disorder. This study was initiated before the publication of the 1981 Education Act and the Warnock Report and the adoption of the recommendations, that the term "children with learning difficulties" should be used to describe those children previously categorised as educationally sub-normal. For the purposes of clarity, the terms in usage at that time, including the category of school, have been retained. Whilst the terminology may have changed, many of the issues we discuss are as relevant today as they were when the study was carried out. Children with psychotic or predominantly organic disorders were excluded and only children aged between 7 and 13 years were included. Maladjusted children in four different kinds of settings, in which children receive special attention for maladjustment or educational backwardness, have been compared: 1. Children in schools, day and residential, geared specifically to the needs of the maladjusted; 2. Children in hospital-based services for the maladjusted, including outpatient, day or residential care; 3. A comparison group of maladjusted children in special schools for the mildly educationally subnormal—again, these were residential and day settings; 4. Finally, a control group of severely maladjusted children in ordinary schools—either in ordinary classes or in classes specially designed for educationally backward children (remedial classes).

HYPOTHESES

The main hypotheses are:

- 1 These settings will differ with respect to outcome.
- 2 There will be differences between the settings in the responses of children with (a) neurotic disturbances and (b) conduct disturbance.
- 3 Outcome will be influenced by factors such as the sex of the child; family size; social circumstances; parental personality and attitudes; parent-child relationship; and also the treatment given.

METHOD

Definition of maladjustment

The children in this study suffered from disorders which were so severe (either in the distress caused to them, their families, or the community, or in the handicap to their inter-personal relationships, behaviour, or education) that they merited intensive treatment. It is in this sense that the term 'maladjustment' has been applied to them throughout this paper. The definition closely follows that employed by Rutter *et al.* (1970).

The selection of cases

Two distinct samples of maladjusted children were selected for this study. The 'designated' maladjusted sample had been referred for treatment of a psychiatric disorder to a hospital unit or school setting specifically designed to help or treat children with serious degrees of maladjustment. The other sample—the 'screened' maladjusted—consisted of maladjusted children in ordinary or ESN schools in the community who had not been referred for help, but who were identified by means of a two-level screen. The first element consisted of a psychiatric interview with the child (Atkins and Kolvin, 1976); the second of information about the children's behaviour derived from interviews with the mother (Kolvin *et al.*, 1975; and Garside *et al.*, 1975) and from teacher questionnaires (Rutter, 1967; Rutter *et al.*, 1970). Without going into technical details here, the scores on the three behaviour scales were summed to give the final screen score.

A major aim in the design of the selection screen was that it should identify a maladjusted control group comparable with the 'designated' maladjusted group both in the quantity of symptoms and in the severity of disorders estimated by clinical judgement. The methods used for such selection must give rise to adequate comparability (Shepherd *et al.*, 1966) in order for the findings of the research to be valid (Rutter, 1970). The mean screen scores of the groups were made comparable by simply eliminating the less-severely disturbed children until the mean scores of the groups showed equivalence. In this way a high behaviour score (that is, the statistical extreme) is used as the criterion of psychiatric disturbance.

It was inevitable, never the less, that the chosen groups would differ in certain quantitative and/or qualitative ways (see Wrate *et al.*, 1985). The theoretical and statistical rationale for retaining the group matching techniques are described elsewhere (Wrate *et al.*, 1985). However, it needs to be said that some allowance can be made for some of the initial inequalities between groups by using statistical methods (covariance), although such statistical control is always imprecise and involves assumptions which may not be met in practice.

Timing of evaluations

The immediate follow-up (first follow-up assessment) was at a median interval of fifteen to sixteen months from admission to the programme. The final follow-up (second follow-up assessment) was at twenty-six to twenty-eight months.

Sex and Age

The mean ages of the children in the four groups were within a range of one year (10.3 to 11.1 years), those with highest means belonging to the ordinary school and educationally subnormal groups. The sex ratios were just under two boys to one girl in all the groups except that of children in schools for the maladjusted, where it was five to one.

Follow-up method

We used two methods to compare the effects of the different regimes. The first, a simple clinical method, was to calculate the *outcome* using the formula

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suggested by Sainsbury (1975) and Kolvin *et al.* (1981) for each child. The formula is $O = 3 M2 - M1$; where O = outcome; $M1$ = initial score; and $M2$ = final score. The children's behaviour was rated by a child psychiatrist on three occasions: at base, at mid-line assessment and at final follow-up. Each child was rated on a four point scale 1 = no disturbance; 2 = slightly disturbed; 3 = moderately disturbed; 4 = markedly disturbed. The range of outcome scores was divided into three categories corresponding to good, moderate and poor outcome. We calculated the number and percentage of children with good, moderate, and poor outcome. The significance of differences between groups was tested using the chi-squared test. Outcome is rather a crude way of presenting data in percentage form but gives reassurance that changes have clinical importance as well as statistical significance. The progress of the children was rated in three ways: in terms of disturbance of emotion (neurotic behaviour), disturbance of conduct (anti-social behaviour), and general disturbance (overall severity). It should be noted that all the children were scored on each of these ratings.

The second, more complex method was to compare regimes by using analyses of covariance. By this method, average *improvement* scores for each regime were compared for every measure separately at each subsequent follow-up. The special feature of analysis of covariance is that differences between regimes in initial severity and other factors which may affect improvement are taken into account. Many of the relevant methodological issues, in particular the assumptions underlying covariance analysis and the question of interaction effects are dealt with elsewhere, in a report of a parallel study (Kolvin *et al.*, 1981 pp. 344-345).

Comments on the design

In a 'naturalistic' study such as this, it is essential to describe the differing treatment programmes and patterns of care. This allows differences in improvement of the children to be related not only to broad types of care, but to differences in the more intimate aspects of the treatment provided. Our design is less than ideal and is likely to yield positive results only if both the patterns of care and the amount and type of treatment vary sufficiently and to a greater extent *between* the groups than *within* the groups.

DESCRIPTION OF THE UNITS OF SERVICE AND TREATMENT RECEIVED

To minimize the selection bias, consecutive children admitted to each of the participating units, who fulfilled the other criteria for the sample, were included in the study. Because almost every major 'treatment' service participated, the regimes can be considered broadly representative of the services available in the north-east at that time.

Treatment and management

Maladjusted children at *ordinary schools* received little help of any kind, and those at schools for the educationally subnormal barely more. The help given to the hospital group exceeded that given to any other group except for treatment prior to the study. The difference between the groups are considerable and cover almost every form of help or treatment before or during

the course of the study. Children in *schools for the maladjusted* received more help, especially in the form of social casework, group therapy, and previous out-patient help, than did the 'screened' maladjusted groups (in ordinary schools and schools for the mildly educationally subnormal). The principal differences between the maladjusted schools group and the hospital group lay in more individual psychotherapy received by the latter, and more frequent prior treatment by the former.

Most children in *schools for the maladjusted* had previously been given some form of help (e.g. out-patient or child guidance work, but also, in some cases, long periods in a hospital in-patient unit). It was noticeable that children with the more intractable disorders were transferred to schools for the maladjusted.

Nearly all the children who attended the various *hospital groups* received traditional individual psychotherapy, and most parents were counselled by the social worker assigned to the case. Individual psychotherapy was usually brief, given weekly or fortnightly, based on broad psychodynamic principles and undertaken either by consultant child psychiatrists or trainee psychiatrists under consultant supervision. This was supplemented by milieu therapy conducted by nurses, teachers and occupational therapists and available daily to all day-patients and in-patients. The hospital group also more often received psychotropic drugs, probably because of the nature of their disorders and the immediate involvement of medically qualified staff. Behaviour therapy methods were well understood by the in-patient teaching and nursing staff, but were not widely used except as an adjunct to the therapeutic milieu for specific disorders such as encopresis. In addition to their various daily activities and therapeutic groups, hospital day and in-patients also spent at least one session per week in occupational therapy. Thus children in '*designated*' residential settings for the maladjusted had very much more treatment of all kinds than did the *educationally subnormal* or the *ordinary school groups*.

Information was available about the extent, but not the quality, of *remedial education*. By definition it was readily available in remedial classes in ordinary schools and comprised at least a quarter of the school work. About 35 per cent of the children in this group spent at least two years' full time in a remedial class. The rest received remedial teaching for about a quarter of their lessons, for between one and two years. Additional remedial help was universally available to children in ESN schools, schools for the maladjusted and to those in hospital settings.

The group from schools for the maladjusted had received the greatest amount of *social-work* help, followed by the hospital group. Children in schools for the educationally subnormal had fewest contacts with social workers, despite the fact that, on nearly all measures of environmental stress or deprivation, this group had an excess of disadvantage over any of the other groups.

The Measures Employed

The children's current *behaviour* and *temperamental* characteristics were assessed by means of focused parent interviews, using a series of reliable five-point unipolar rating scales (Kolvin *et al.*, 1975, Garside *et al.* 1975). The Rutter Teacher Scale, extensively described in the literature (Rutter *et al.*, 1970), is

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a short questionnaire of known reliability and validity. Four of the items may be summed to produce a 'neurotic' subscore, and a further six yield an 'antisocial' subscore.

The psychiatric interview with the child was semi-structured (Atkins and Kolvin, 1976), modelled on that originally described by Rutter and Graham (1968). Other measures were based on comprehensive information from parents, school and child interview. The nature and severity of the disorder for each subject was assessed clinically.

Findings — Outcome

TABLE 1 OUTCOME IN PERCENTAGES
IN RELATION TO OVERALL SEVERITY OF DISTURBANCES

Children in:	Schools for Malad- justed	Hospitals	ESN Schools	Ordinary Schools
n =	65	65	68	60
After one year				
good	8	13	17	43
moderate	31	49	22	11
poor	61	38	61	46
After two and half years				
good	20	37	17	44
moderate	40	46	26	13
poor	40	17	57	43

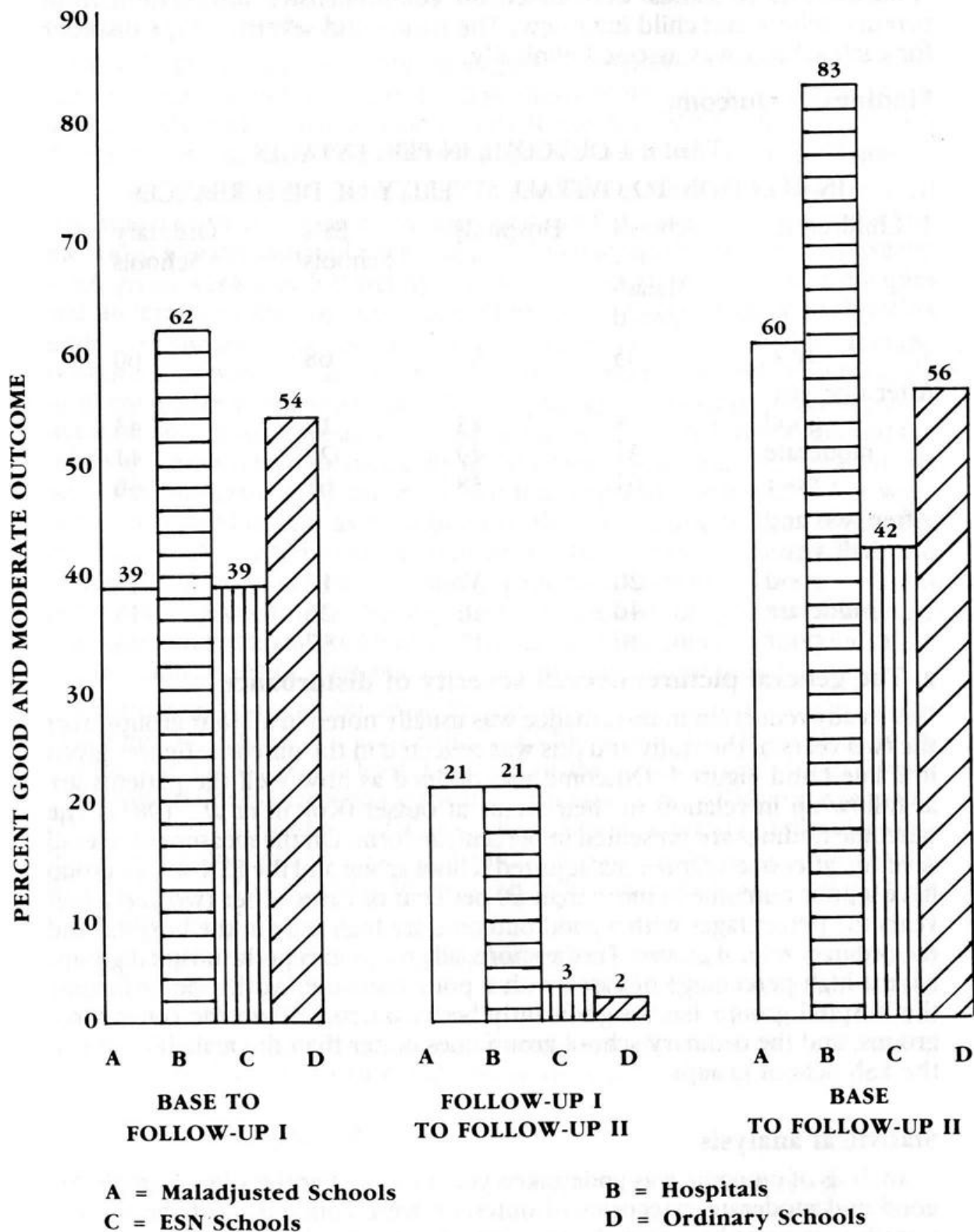
a. The general picture: overall severity of disturbance

A steady reduction in disturbance was usually noted in all four groups over the two years of the study and this was reflected in the outcome figures given in Table I and Figure I. Outcome was defined as how well the patients are at follow-up in relation to their status at outset (Kolvin *et al.*, 1981). The outcome findings are presented in percentage form. On the measure of overall severity, *after one year* the maladjusted school group and the ESN school group have a poor outcome in more than 60 per cent of cases. *After two and a half years* the percentages with a good outcome are high only in the hospital and the ordinary school groups. Furthermore, all groups except the hospital groups have a high percentage of cases with a poor outcome. At this point in time the hospital groups has a significantly better outcome than the other three groups, and the ordinary school group does better than the maladjusted and the ESN school groups.

Statistical analysis

Analysis of outcome was undertaken year by year. For the sake of simplicity, good and moderate categories of outcome were combined but the tests of significance were based on the division of outcome data into three groups. The maladjusted children in *ordinary schools* did well in the first year, doing

FIGURE I
HISTOGRAMS OF OUTCOME BY GROUPS ACCORDING TO SEVERITY OF DISTURBANCE



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b. Antisocial and neurotic disturbance (figures II and III)

FIGURE II

HISTOGRAMS OF OUTCOME BY GROUPS ACCORDING TO SEVERITY OF ANTISOCIAL DISTURBANCE

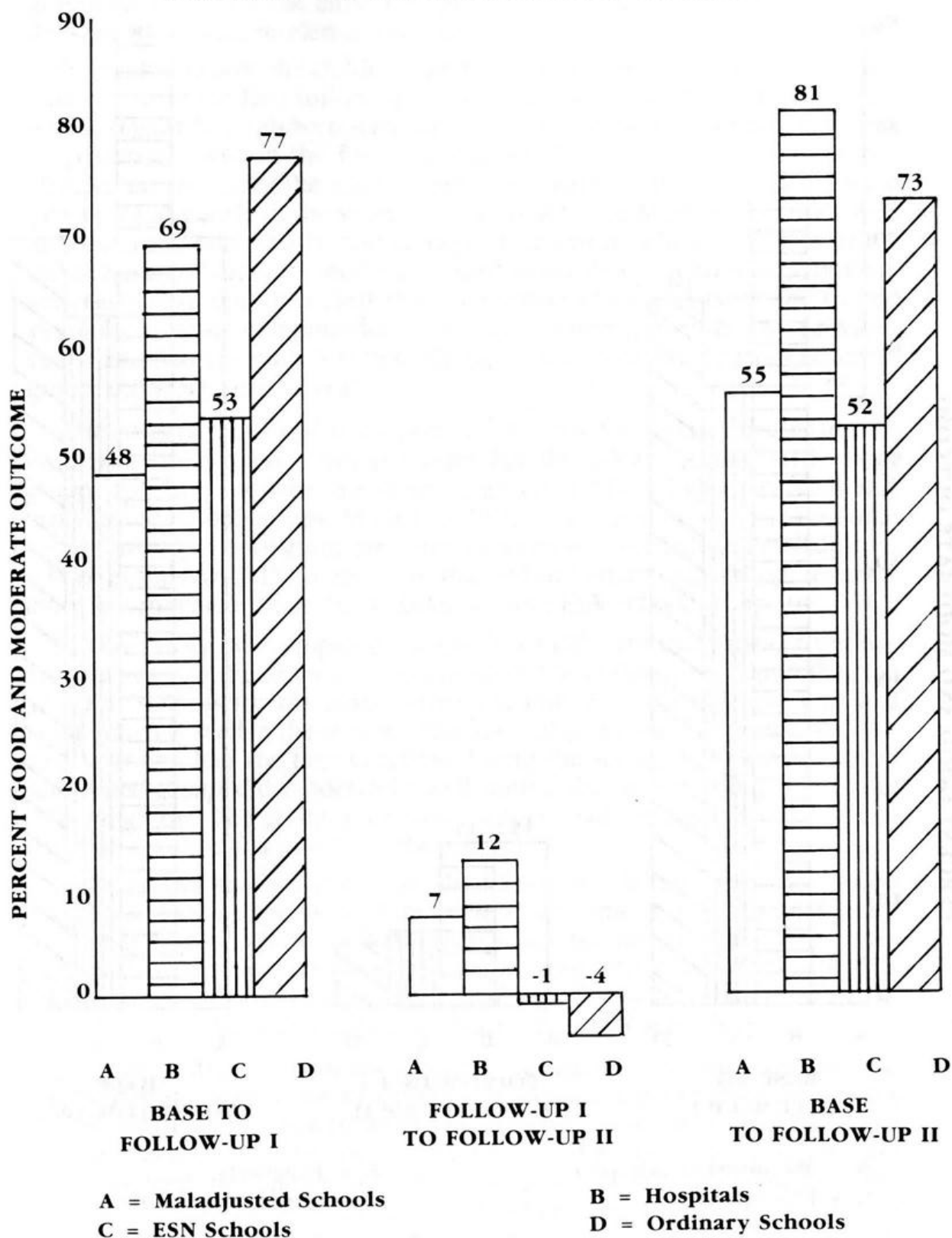
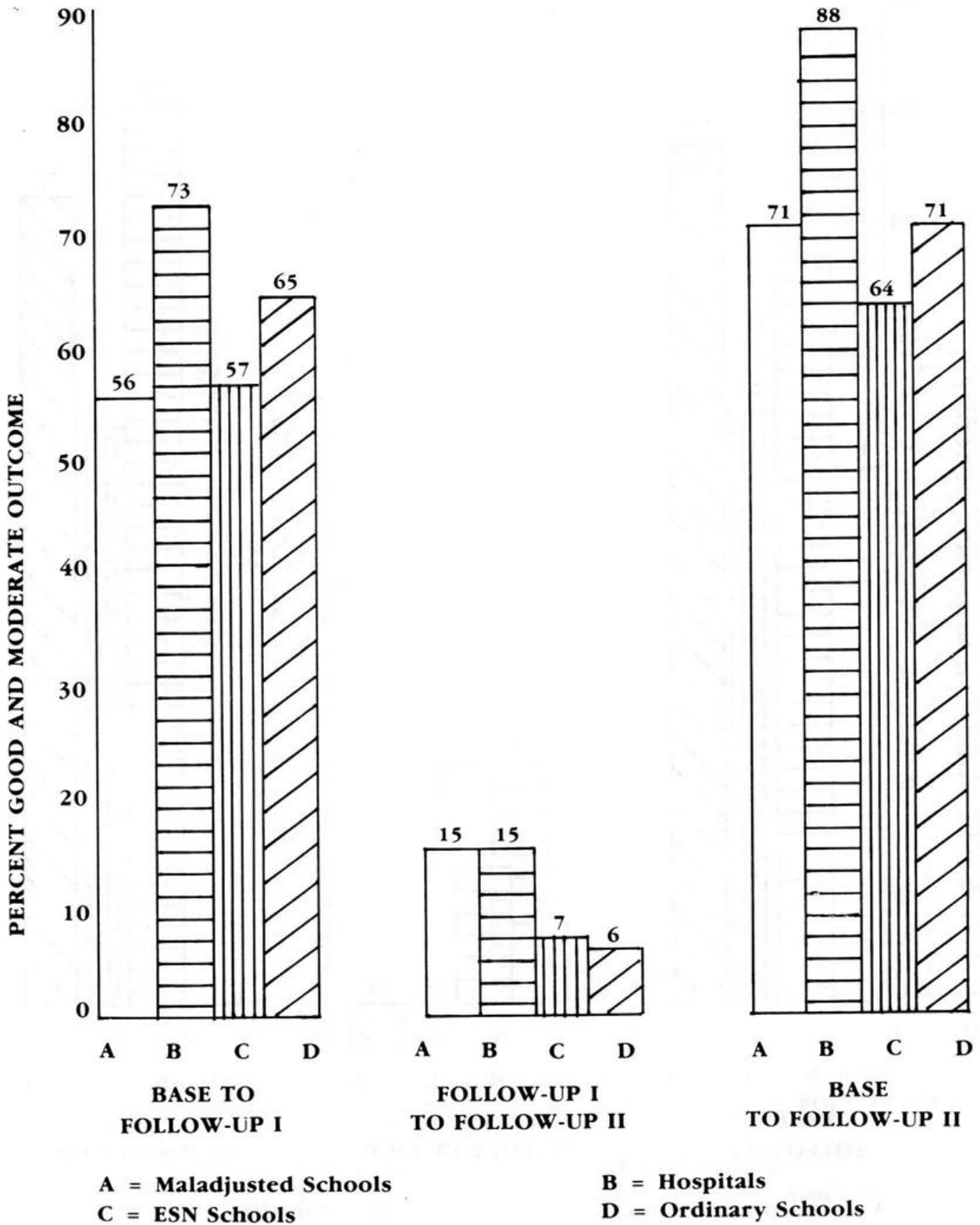


FIGURE III

HISTOGRAMS OF OUTCOME BY GROUPS ACCORDING TO SEVERITY OF NEUROTIC DISTURBANCE



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significantly better than those in *maladjusted schools* ($p < 0.01$) and ESN schools ($p < 0.05$). The *hospital group* also did significantly better than the *maladjusted-school group* ($p < 0.05$) and ESN group ($p < 0.01$). At the second follow-up, maladjusted children in *ordinary schools* and in *hospitals* had a significantly better outcome than both the *educational subnormal* and *maladjusted-school* groups ($p < 0.01$). (In the latter comparison the differences were based on a division into good, moderate and poor categories—see Wrate *et al.*, 1985).

To determine how the children fared during their second year of the study, outcome over the first follow-up period was subtracted from that over the second (Figure 1). It can be seen that maladjusted children in *ordinary schools* do reasonably well in the first year but poorly in the second; maladjusted children in schools for the *educationally subnormal* do moderately well in the first year but poorly in the second; the *hospital patient* group do rather well in both years; and, finally, the group of children in schools specifically for the *maladjusted* did only moderately well in the first year but comparatively better in the second. It is clear that the changes from the base to the second year follow-up are compounded of changes occurring over the two previous years, and that the rates for these changes vary considerably from group to group and from year to year.

In respect of *antisocial behaviour*, at the first follow-up the children in ordinary schools did significantly better than the ESN and maladjusted school groups ($p < 0.01$). Likewise the hospital group did better than the ESN and maladjusted school groups. At the final follow-up, the superiority of outcome in the *ordinary school* group persisted in relation to the ESN and maladjusted school groups ($p < 0.01$). In addition, the *hospital group* showed significantly more improvement than the *maladjusted* and *ESN school* groups ($p < 0.01$).

Further, when we compared the effects of different management settings year by year on the *antisocial behaviour* of the children we found that the group at *schools for the maladjusted* did rather poorly the first year and comparatively well in the second. The *hospital group* did reasonably well the first year and had the best outcome during the second. The *educationally subnormal group* did moderately well during the first year but poorly the following year. The group in *ordinary schools* had the best outcome during the first year but did poorly in the second.

In the case of *neurotic disorders*, the pattern is different. The *maladjusted and ESN school groups* showed the poorest outcome and the hospital group the best at the first follow-up. At the *final follow-up*, the hospital settings again have the best outcome which proved significantly better than that of the *ESN school group* ($p < 0.01$). This good outcome was closely followed by *ordinary schools* which also did significantly better than ESN schools ($p < 0.01$).

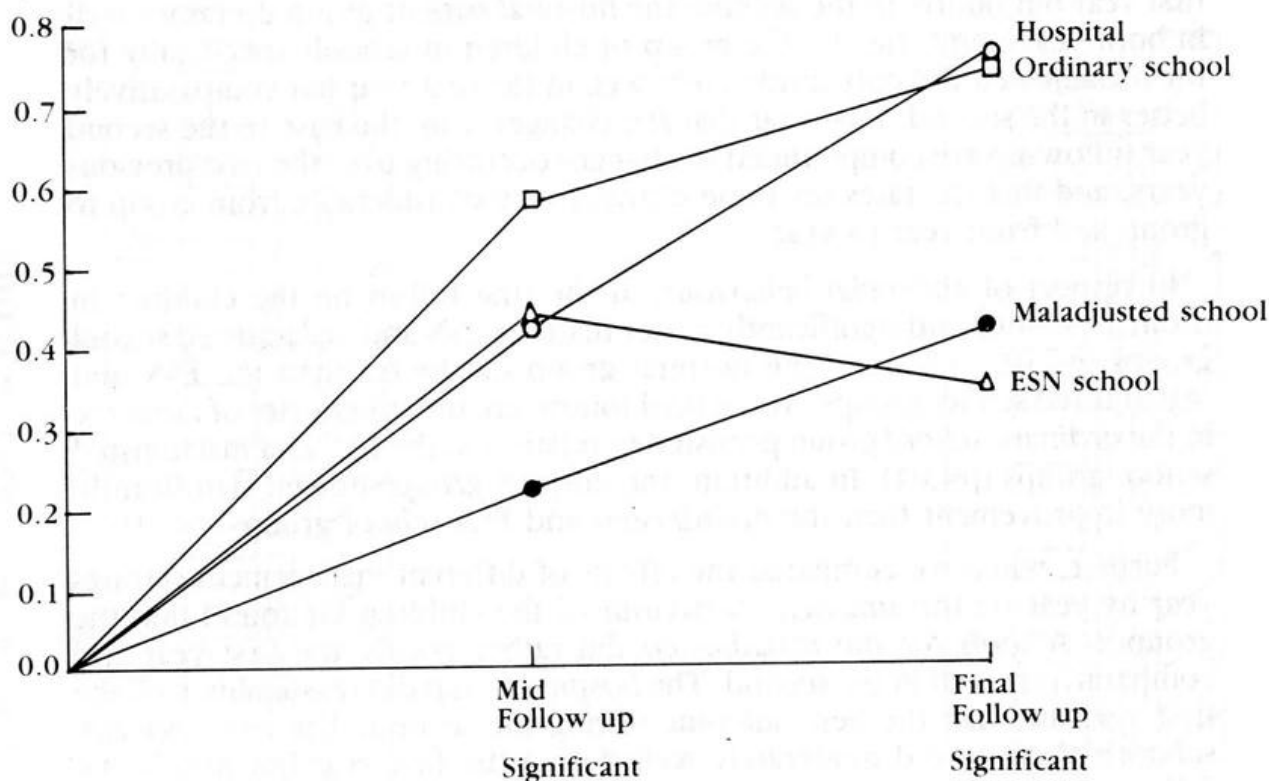
Comparing the effects of the different management settings year by year on the *neurotic behaviour* of children, we found that the group at schools for the maladjusted showed moderate outcome at the first and reasonable outcome over the second; the hospital group did well over the first year and again showed reasonable outcome over the second; the educationally subnormal group did moderately well over the first year but less well than the previous two groups over the second; neurotic children in ordinary schools

did well over the first year but no better than the ESN group over the second year.

c) Improvement (figure IV)

Fig. IV

**A. MEAN IMPROVEMENT SCORES (18 items)
Aggregate behaviour at start, midline and final follow up**



Our investigation demonstrates the great variability of behaviour and emotions over time of the children in the various groups according to the type and severity of their disturbance. Using such multivariate techniques of analysis, the findings proved broadly similar to the above outcome results (except for the ordinary school group). We argue elsewhere that these variations reflect the difficulty of achieving precise comparability of type and severity of disturbance in any controlled study and reinforce the view that simple analyses of follow-up date give us only simple and crude answers (Wrate *et al.*, 1985). Only multivariate analyses can provide more precise answers and a more sophisticated level of understanding.

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Discussion

In this study we have compared the progress of groups of maladjusted children in different management settings. Previously, the fate of children with psychiatric disorders in such settings has been largely a matter for speculation. Our study has shown that children with psychiatric disorders improve whether or not they are given specific help. This is not a new finding (Robins, 1970; Shepherd *et al.*, 1971; Robins, 1973; Kolvin *et al.*, 1981). Our study did, however, show differences in the extent of improvement in relation to different types of disorder and different management settings.

SOME IMPORTANT ISSUES

A number of important questions remain. What is the explanation for the different rates of progress of the different groups over the two years of the study? Why did the educationally subnormal children do so poorly at the final assessment? Why did hospitals have so good an effect on neurotic disturbances at the final assessment compared with the effects of other special settings? Why did ordinary schools have so good an effect on antisocial disorders? What are the explanations for the differences in outcome for children with conduct and neurotic disorders? What is the importance of the source of evidence when measuring change? What part does treatment play? These and similar questions are discussed below.

Effectiveness of treatment

The question of effectiveness of treatment is bound up with the question of comparability of the groups, and the latter has to be viewed in terms of the nature and severity of the initial maladjustment and the presence of adverse social and family factors. There are indubitable differences between the groups in relation to all these factors and these are not only quantitative but qualitative as well. For instance, children in ordinary schools have the fewest antisocial disturbances and overall their disorders are the least severe. Elsewhere we have tried to make allowance for such differences using complex statistical techniques and we conclude that, while ordinary schools seem to cope well with the maladjusted children in their care, the extent of improvement or change may have been overestimated (Wrate *et al.*, 1985). This brings us to the subject of outcome.

Though crude, our technique of measuring outcome has the merit of being based on clinical measures of severity as rated by clinicians. And the clinician is likely to take into consideration qualitative behavioural factors in making such ratings. This is discussed in greater detail elsewhere, where it is argued that with the type of design we have used in this research, our outcome scores more fairly reflect change, particularly in a clinical sense and, further, are less liable to inexplicable distortions which may occur with complex statistical analyses (Kolvin *et al.*, 1987). It is interesting to note that at the final follow-up, good plus moderate overall outcome is only achieved by 56% of the ordinary school group but by 83% of the hospital group (Table 1). Though we do not have sufficient cases to estimate a base rate of spontaneous improvement, it is evident that the rate in ordinary schools is less than the traditional 66% suggested by Levitt (1957, 1963, 1971) and Shepherd *et al.*

(1971). Further, as intimated elsewhere (Wrate *et al.*, 1985), this ordinary school group was significantly less maladjusted in a qualitative sense and had fewer cases of severe conduct disorders; and furthermore, the demonstrated disturbance was likely to have been of a less *durable* variety.

A word needs to be said about spontaneous recovery as reflected by the measure of outcome. First, the antisocial behaviour of maladjusted children who remain in ordinary schools is quantitatively the least severe of all the groups studied and it is also likely to be the least complex. It needs to be noted that antisocial behaviour tends to be intransigent to treatment (Kolvin *et al.*, 1981; Robins, 1970). Second, the children in ordinary schools were exposed to numerous in-depth cognitive and personality assessments and, in addition, there were interviews with their families. The literature suggests that such contact with cases will have a therapeutic impact. Third, there were regular requests for information from the schools to whom it must have been obvious that we were enquiring about vulnerable children. In these circumstances, it is inconceivable that no informal help was made available to the children we studied. For all these reasons we must conclude that our controls were less than ideal and that our estimate of spontaneous recovery may have been too high (see Kolvin *et al.*, 1981).

Our outcome data also suggest that antisocial behaviour is an important prognostic factor, those groups with the most severe degrees of antisocial behaviour at the baseline assessment having the poorest outcome. This suggests that one cannot allow for such differences adequately by statistical means in a "natural experiment" such as this. Only a random allocation of cases to the different settings would have overcome this problem. Severity of neurotic behaviour did not have similar adverse prognostic implications.

Differing outcomes in different management/treatment programmes
The outcome of untreated maladjusted children in ordinary schools was relatively good, especially for antisocial disorders. This was particularly evident when allowance was made for the different initial levels of severity of the criterion variables (using a covariance technique). As this group had received little specific psychotherapy, the difference must be attributable to some other factors such as a less persistent disturbance; major differences between the groups in family socio-economic circumstances; or some other adverse emotional and psychological influences. When statistical allowance was made for such factors, the magnitude of the differences of improvement between the groups was reduced and the children with neurotic disorders in ordinary schools were then found to do as well as those in hospital settings (Figure IV).

Maladjusted children in ordinary schools

Another finding of interest is that the mothers of maladjusted children in ordinary schools were comparatively more firm (disciplinarian and less indulgent). This suggests that such child-rearing factors, together with positive social factors, are predictive of improvement.

As far as factors intrinsic to the children are concerned, the maladjusted children in ordinary schools had higher mean intelligence scores than those in educationally subnormal schools which suggests that higher levels of intelligence are associated with greater improvement.

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We have also demonstrated that the positive outcome of maladjusted children in ordinary schools mainly occurred during the first year. Over the second year the extent of change was less than that achieved by the hospital groups and was even less than that of the children in schools for the maladjusted. The complex statistical analyses suggest that the positive change in this maladjusted schools group may have been underestimated by the outcome technique. However, elsewhere we argue also that covariance techniques may have overestimated improvement of the ordinary school group.

The hospital group

The children in the hospital group were similar to those in the ordinary school group both with regard to levels of intellectual ability and in the comparatively enlightened maternal approach to child rearing. The neurotic behaviour of the children in this hospital group responded comparatively well to treatment. The main differences in management as compared with the two special school groups (maladjusted and educationally subnormal) is that the children in the hospital groups were given more treatment of all kinds, had fewer adverse temperamental characteristics and had a higher mean level of intelligence. All these factors suggest that:

1. All else being equal, in the medium term the neurotic behaviour of disturbed children responds better to intensive and concentrated psychotherapeutic help, as is provided in hospital clinics, than to the help available in any other special setting that we have studied. On the other hand, antisocial behaviour responds best to management in ordinary schools. Thus, despite the qualitative differences which lead children to receive hospital treatment, such disturbed children do as well as those children whose behaviour is not severe enough to cause them to be extracted from ordinary schools.
2. Despite the severity of disturbance, maladjusted children with higher IQs appear to have a better prognosis than those with lower IQs, which gives rise to the unsurprising conclusion that IQ of the children is of considerable prognostic importance. However, the question arises of how independent the effect of IQ is as a predictor of outcome. In our complex statistical analysis it proved to have little independent effect. This does not mean that IQ is unrelated to outcome but rather that its effects were absorbed by other covariates, such as measures of social influence.
3. It is evident that the majority of children in the hospital group spent most, if not all, of the second year in ordinary schools. Hence, most of the improvement of children with conduct disorders from hospital settings over this period could possibly be attributable to their subsequent exposure to normative experiences in ordinary schools after the initial hospital programme. This suggests that social modelling in ordinary schools may be crucial in maintaining the improved response.

Schools for the maladjusted

The children in schools for the maladjusted differed from those in the hospital group in having more adverse life events; less intensive treatment, lower mean IQs and more negative temperamental characteristics. However, our method ensured that the level of clinical disturbance at intake was substantially the

same for both groups. Therefore on most factors, other than the initial level of clinical disturbance, children in maladjusted schools were worse off than children in hospital settings, and so it is probably this clustering and interaction of adverse factors within the child and his or her environment that determined this group's relatively poor outcome especially in the medium term. However, while this group responded moderately over the first year, especially in relation to antisocial behaviour, they did relatively well over the second year. Such findings support the argument that the response to help of children in such settings occurs only with time, and that the delay in response is due to the durability or intractability of their disorders—qualities which are likely to have determined their selection for attendance at such schools in the first place.

Schools for the Educationally Subnormal

One of the clearest findings of our study is that the maladjusted children in schools for the educationally subnormal, especially those with anti-social behaviour, flourish little beyond their first year of admission. This is likely to represent the maximum response to a helpful educational environment in the absence of specific psychotherapeutic intervention.

These children suffered from an excess of at least two adversities. Compared with the ordinary school group, they had the lowest mean IQ and almost always the poorest outcome as well as an abundance of family and environmental problems. It is not possible to determine with any certainty which of these factors was most instrumental in determining their poor outcome (such factors were also noted for children in schools for the maladjusted). Another possibility is that the poorest eventual outcome of disturbed educationally subnormal children, was attributable to the smaller amount of psychotherapeutic help they received. The precise answer cannot be determined, as those who started with least intelligence and had the worst family experiences also received the least help and improved the least.

Our findings confirm previous reports that low IQ is an important prognostic factor for adverse outcome (Sundby and Kreyberg, 1968). It must be admitted that our outcome technique may have done less than justice to the response of maladjusted children in ESN settings especially over the first year (Figure IV).

Educational Themes

For administrative reasons, it was not possible to obtain data on IQ at the intermediate follow-up, and therefore IQ was not included in our final analysis. However, as far as improvement in reading ability is concerned, the children at schools for the educationally subnormal again showed the least improvement of any of the groups, on both first and second follow-ups, irrespective of how we reorganised our data. This probably reflects both the multiplicity of handicaps of children in this setting and the frequent lack of appropriate educational and other facilities. The admission procedures, facilities and curricula provided for maladjusted children in educational subnormal settings should therefore be re-examined.

Further, it is to be noted that no difference could be found between settings specifically for the maladjustment and ordinary schools with regard to broad improvement in intelligence and achievements. This speaks well for the influence of the curriculum in maladjusted schools.

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Overall Conclusions

Our findings suggest that even severe maladjustment may be adequately contained in ordinary schools and ordinary classes. The finding is supported by the work of Roe (1965) Lunzer (1960) and Shepherd *et al* (1971). Roe demonstrated that tutorial classes (special classes in ordinary schools) were associated with significant improvement; the improvement of children in residential schools for the maladjusted proved to be non-significant, and the children in day schools for the maladjusted not only did more poorly but, indeed, showed overall deterioration. However, Roe's findings have to be viewed with caution as hers was a one-year follow-up only and our research has shown differing rates of improvement from year to year for the different groups of maladjusted children. Indeed, our findings do not support Rutter's (1970) contention that two years is too long for a follow-up study. We have demonstrated clear trends towards improvement year by year, but especially over the second year, and it was only with a stage-by-stage analysis that a clear picture emerged of the differences between settings.

Some Questions and Implications

What is the best way to help educationally subnormal children who are maladjusted? The clearest finding of our study is that maladjusted children do not flourish in schools for the educationally subnormal beyond the first year in that setting. We speculate that this may be attributable to factors within the child, within the school, within the family or all of these. We have argued that poorer outcome is likely to be caused by a combination of multiple handicaps in the child, of adverse life experiences, of the scarcity of psychological help available to educationally subnormal children, and of the poor contact between the families and the school.

In view of the weight of evidence that neurotic behaviour responds well to the intensive therapy programmes available in hospital settings, there is a good case for screening children going into educationally subnormal settings for disturbance especially of a neurotic variety, and for giving them more appropriate treatment. Some of these children may have to be diverted to community or hospital treatment programmes or, with appropriate support, could be maintained in special classes in ordinary schools. Some could be diverted to those schools for the maladjusted which are prepared to cater for children over a wide range of intelligence. However, if the bulk of these children are to be maintained in schools for the educationally subnormal, more resources must be made available: more staff training in special skills to deal with maladjustment; special units or adjustment classes, catering more specifically for maladjusted children, within schools for the educationally subnormal; increasing contact between school staff and the children's families to help them with any social and psychological problems. Such ventures should include a social worker on the school staff; and a redesigned curriculum to meet the needs of maladjusted ESN children.

WHERE SHOULD CHILDREN WITH SERIOUS ANTISOCIAL BEHAVIOUR BE MANAGED?

The subject of antisocial behaviour is very complex. The evidence is that, initially, schools for the maladjusted do not cope with such children any better

than do schools for the educationally subnormal. Ordinary schools appear to have the best results. We suspect that there are important quantitative (in terms of severity) and qualitative (in terms of complexity and persistence of disorder) differences in children with antisocial behaviour retained in ordinary schools and those diverted to special settings. Nevertheless, with our more refined analyses, taking a variety of environmental influences into account, we found that children with antisocial behaviour in hospital settings show greater eventual progress than do those in the other two special settings. Furthermore, progress in a substantial proportion of children in schools for the maladjusted occurs only during the second year, while the progress of those in schools for the educationally subnormal comes to a halt at the end of the first year. While some of the children with antisocial behaviour currently in schools for the educationally subnormal could possibly be maintained, at least for a while, in remedial units of ordinary schools, we believe that careful consideration must be given to qualitative factors in the children and their families which might hinder the success of such a venture.

In general, this study illustrates that neurotic behaviour is associated with a better outcome than antisocial behaviour, the one exception being antisocial behaviour in ordinary schools.

The ordinary-school group contained children both in remedial classes and ordinary classes. Although we have not given data on this, we found antisocial behaviour to respond at least as well in remedial classes in ordinary schools as in schools for the maladjusted. This is consistent with the common comments of teachers of remedial classes that both antisocial and neurotic behaviour of children with educational problems frequently subsides spontaneously soon after admission to a remedial class. It is not clear how remedial classes achieve this without specifically focussing on maladjustment. It may be because the child is taken out of a crisis situation in which his or her behaviour had become maladaptively interlocked with staff-management procedures; or it may be because remedial classes have some features in common with schools for the maladjusted—for example, the smaller size of the class and the possibility of tailoring management and curriculum to the individual child. In addition, in a remedial class it is more possible to keep in touch with ordinary society, so that the child is provided with normal models, than is usually the case in schools for the maladjusted. Further, maladjustment in educationally subnormal children may also be helped by directing attention to their educational deficiencies.

Apart from remedial classes, there are maladjusted children in ordinary classes in ordinary schools. Our evidence suggests that antisocial behaviour responds very well in this setting. This suggests that certain children with antisocial behaviour might well be retained in ordinary schools. We must again emphasise, however, that there may be important quantitative and qualitative factors which preclude particular children from being maintained in ordinary schools with any reasonable degree of ease. Where should children with neurotic behaviour be managed? Our data shows that such children in the long term fare best in hospital settings and worst in settings for the educationally subnormal. Further, neurotic behaviour shows as great a response in ordinary schools as in schools for the maladjusted. This again suggests that some children with this type of behaviour could be retained in ordinary schools.

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