

## 11 The hearing-impaired child: behaviour and personality

### **Introduction and review of previous literature**

There are few systematic studies of psychiatric disorder, behaviour or temperament of deaf children. Most of those undertaken are marked by inadequacy of the research design or lack of appropriate instruments or both and therefore it is not surprising that the findings are often ambiguous, inconclusive or contradictory and certainly not comparable.

Further, the validity of the earlier research into maladjustment of deaf children was seriously diminished by the fact that these were mainly paper and pencil tests which took little account of the children's poorer educational achievements and poor language developments (Reivich and Rothrock, 1972). The findings of such research were, in brief, that hearing children proved more well adjusted than deaf children and that deaf children raised in families where other members were deaf proved better adjusted than those raised in families where the other members were not deaf (Myklebust, 1964).

Two other features which merit comment are those listed by Vernon (1961) in his account of brain-injured deaf children; these are psychological immaturity and denial which children used as characteristic defence mechanisms. Treacy (1955) also concludes from his research that deaf children are less socially mature than hearing children. Furthermore, there is some evidence that, during adolescence, the social maturity of seriously deaf children tends to decrease while that of partially hearing children tends to show an improvement (Treacy, 1955). Myklebust (1964), from studies using the MMPI and his recent review, concludes that the level of social maturity of deaf children is some 10% poorer than that of hearing children and that this, rather than maladjustment, is their major psychological handicap. Levine and Wagner (1974) report on their use of a projective technique called the 'Hand Test'. From their

work they attribute the problems of deaf individuals to frustration in the face of their speech and language difficulties.

More recently, test instruments which are completed by teachers or parents have found favour. Their strength is that they are dependent on objective observations and not on the self-reporting of the deaf. While their validity for the deaf has not as yet been adequately established they provide a useful means of comparing the reported behaviour of deaf and non-deaf children.

One instrument which has been used quite extensively is the Bristol Social Adjustment Guide (Stott, 1963). Fisher (1965) compared 83 hearing-impaired children aged five to 16 with a control group and found that the hearing-impaired were significantly more withdrawn than the controls. On the other hand, Rodda (1970), using the same instrument, reported a percentage of deaf adolescents who were disturbed which was only slightly greater than that of controls. Unfortunately, the size of his control group was too small to inspire confidence.

There is also the question of whether factorial analysis will reveal distinctive behavioural patterns in terms of the structure of the factors that are found with deaf children as compared to normal children. Reivich and Rothrock (1972) undertook factorial analysis of the behaviour of 327 deaf students aged six to 20 using the Behaviour Problem Check List (Quay and Peterson, 1967) which is completed by teachers. Their first two factors were structurally similar to those which have been described in all factorial studies and have been labelled conduct and personality or neurotic factors (Kolvin *et al.*, 1975). Their third factor, which they describe as 'immaturity inadequacy', has been described in only a few studies such as that of Quay and Peterson (1967) and is likely to be an artefact of the wide age range of children studied or of the features included in the factor analysis. None of these factors are therefore specific for the deaf. Their fourth and fifth factors account for so little of the variance that it seems reasonable to ignore them. This decision is supported by the large number of variables (55) included in the analysis. Of greater importance is the fact that the means for the above three factor scores prove to be very similar to those of normal elementary school children but very significantly lower than those found with institutionalized delinquents. The only interpretation that is therefore possible on this factorial analysis is that the behaviour of deaf students is little different from that of their hearing counterparts. However, such findings must be viewed with caution as the mean age of the deaf is very much higher than that of the normal children with whom they are being compared and as far as can be ascertained no allowance has been made for age.

Another question is whether greater degrees of deafness are associated with higher rates of maladjustment. Bowyer *et al.* (1963) found little

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difference between the severely deaf and partially hearing using the Bristol Guides. Rodda (1970) also reports that the degree of hearing loss does not appear to be correlated with the extent of maladjustment.

The prevalence of psychiatric disturbance among deaf children has been variously estimated from less than that found in the general population to significantly higher. Simpson (1964) reports an 11.7% rate of maladjustment among 359 deaf school children aged 15 to 16. No figures are provided for controls so it is difficult to know what these figures represent. Williams (1970) cites an estimate, by the National College of Teachers of the Deaf, of 6% at the age of 12 years but again this was an uncontrolled study. In addition, he has undertaken an analysis of the types of psychiatric disorder in deaf maladjusted children and concludes that these are similar to those found in normal children and in children handicapped in other ways. He found that approximately 44% had antisocial disorders, but only 8% had neurotic and 10% mixed disorders. Other disorders which were diagnosed with reasonable regularity were psychosis in 20% and hyperkinetic disorders in 10%. As with children without hearing impairment, the main association is with disturbed home backgrounds.

### Aim

The aim of this chapter is to survey two groups of hearing-impaired children, namely, partially hearing and profoundly deaf, in relation to their behaviour and temperament as described by parents and by their teachers.

### Method

The assessment instruments used were the Temperament Scale (Gar-side *et al.*, 1975) and the Behaviour Scale (Kolvin *et al.*, 1975). These instruments and their various dimensions have been described in previous chapters. The Teacher-Child Scale B (Rutter, 1967) was also completed for each child.

### Findings

#### *Rutter Teacher Scale* (see Tables I and II)

When the deaf group is divided into profoundly deaf and partially hearing groups (Table I) the high rate of behavioural disturbance of the

Table I Classroom behaviour and severity of deafness—mean scores—teacher's questionnaire (Rutter Scale 'B')

Feature	B = Residual		C = Partially hearing	D = Profoundly deaf	A vs C			B vs D		
	A = Control	B = Residual speech retarded			A vs D	B vs C	C vs D	A vs D	B vs D	C vs D
Rutter total	5.8	8.3	7.3	12.0	NS	1%	NS	5%	5%	
Antisocial subscale	1.1	1.7	1.6	3.4	NS	1%	NS	1%	5%	
Neurotic subscale	1.4	1.6	1.1	1.8	NS	NS	NS	NS	NS	

Table II Classroom behaviour—psychiatric abnormality: Rutter questionnaire in percentages

Score 9+	B = Residual speech retarded		C = Partially hearing		D = Profoundly deaf		chi-squared
	A = Controls	B vs D	C vs D	B vs D	C vs D	A vs D	
18	36	28	54	5%	1%		

profoundly deaf the children scored lower than the population. Rutter's questionnaire showed that the percentage of children in the deaf school who were almost completely deaf was 54% compared with 28% in our control group. This difference was significant (chi-squared = 5.4, p < 0.05).

#### Behaviour

Both the deaf and the hearing children had similar overall Rutter questionnaire scores. There was no significant difference between the deaf and hearing children in any of the Rutter questionnaire subscales. When the deaf children were compared with the hearing children, there was no significant difference in the Rutter total score (8.3 vs 7.3, NS), antisocial subscale (1.7 vs 1.6, NS), or neurotic subscale (1.6 vs 1.1, NS).

profoundly deaf is revealed. In the Isle of Wight Study it was found that, of the children finally diagnosed as showing psychiatric disorder, 53% scored above the cut-off point of 9, compared to 7.1% of the general population (Graham and Rutter, 1970, p. 158). In a subsequent study Rutter and colleagues (1975) report a slightly higher percentage (10.6%) of the population on the Isle of Wight Study falling above the designated cut-off while the percentage (19.1%) in an Inner London borough was almost double that of the Isle of Wight Study. In our study many more of our controls scored above the cut-off of 9 as compared to the Isle of Wight child population figures and, indeed, our figures are more similar to those reported in the Inner London borough. It is of interest to note that the percentage of our controls who scored above the cut-off is double that of the Isle of Wight Study, the percentage of our partially hearing group is three times higher, while that of the profoundly deaf is about six times higher (see Table II). Our results show that neither the controls nor the Residual Speech Retarded Group differ from the partially hearing. On the other hand, the profoundly deaf group differ significantly from the controls and the Residual Speech Retarded Group on both the mean total score and mean antisocial subscores of the Rutter Scale. From Table I it will be seen that there are no significant differences between the groups on the neurotic subscore of the Rutter teacher questionnaire. Furthermore, it is evident that the most seriously disturbed group is the profoundly deaf and this disturbance is mainly of an antisocial variety.

*Behaviour Scale*—Based on an interview with mother (see Tables III and IV)

Both hearing-impaired groups showed less behaviour deviance on overall assessment, but this was statistically significant in the case of the profoundly deaf only (see Table III). Of the nine dimensions studied (neurotic, antisocial, sleep, psychosomatic, bowel control, motor/articulation, phobias, appetite and somatic) there were significant differences between the controls and the hearing impaired groups on only three. On two of these the hearing-impaired showed less disturbance in the areas of phobias and neuroticism. The third dimension combined a heterogeneous collection of features such as motor tics, verbal tics, enunciation, etc. It is therefore not surprising that the hearing-impaired group scored significantly higher on this dimension and for interpretation purposes it can be ignored.

When looking at peer relationships, the profoundly deaf especially, and to a lesser extent the partially hearing, appear to be at a disadvantage (see Table IV). The profoundly deaf subjects have significantly fewer peer contacts and are more teased and bullied than their hearing

Table III *The behaviour and temperament of deaf children—mean scores*

	Groups				Significance	
	A = Controls	B = Residual speech retarded	C = Partially hearing	D = Profoundly deaf		A vs C
<i>Behaviour</i> (parent interview)						
Global behaviour deviance (mean score)	42.9	43.1	39.9	39.2	NS	5%
Phobic dimension	6.1	6.4	4.8	5.5	1%	NS
Motor articulation dimension	2.9	5.3	4.06	4.90	1%	1%
Neurotic dimension	13.4	13.7	11.8	11.7	5%	5%
<i>Temperament</i> (parent interview)						
Mood	8.5	9.5	10.4	8.9	1%	NS
Irregularity	9.4	8.7	11.3	11.8	1%	1%

Table IV Social relationships of deaf children

	A = Controls	B = Partially hearing	C = Profoundly deaf	A vs B	A vs C
No. of peer contacts in last week	%	%	%		
9 or less	29	34	61		
10-29	51	47	21	NS	1%
30 or more	20	19	18		
Child bullied					
never	75	58	48	NS	1%
frequently occurs	25	42	52		
Child teased					
never in last year	62	37	32		
< 1 month	20	26	42	5%	1%
> 1 month	18	37	26		

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counterparts. The partially hearing subjects are also significantly more teased than their normal hearing peers. Young children are inclined to be cruel, and therefore the present finding is not surprising; it suggests that hearing-impaired children are teased and bullied because of their handicap.

### *Temperament* (Table III)

Of the four dimensions studied there were differences on only two. Both hearing impaired groups proved more irregular in temperament but only the partially hearing were significantly more moody than the controls.

### **Discussion and conclusions**

At first glance our findings on behaviour appear contradictory in that teachers of the deaf report excess, and parents of the deaf report a relative lack of disturbed behaviour. However, in other major studies the agreement between teachers and parents about disturbance of behaviour has also been low (Rutter *et al.*, 1970a; Minde and Minde, 1977). In this case there are a number of possible explanations, but we will focus on three. First, the behaviour may be situation-specific and reveal itself only in the school setting where these deaf children are likely to be confronted with the realities of life; second, the parents may not be aware of the unusual nature of the behaviour; third, it may simply reflect the relative lack of exposure of parents to those profoundly deaf children who are in a residential school. We consider that the true explanation is likely to be a composite of all the three reasons given, the most important being the last of the three. In these circumstances the most valid description of the children's behaviour is likely to be available from the school. Elsewhere we have pointed out that the mothers of the profoundly deaf appeared to be more resilient than the mothers of the partially hearing to the psychological stresses associated with coping with a handicapped child. In their review, Schlesinger and Meadow (1972) described contrasting research findings—some favouring residential students and others favouring day students. From such findings they go on to argue that there is likely to be an important interaction between school and family variables. Our findings tend to support this view, and we therefore agree with these authors that the issue of residential as against day schooling can only be evaluated meaningfully when all crucial factors are taken into consideration.

Turning to the teacher questionnaire, our data indicate that

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behavioural disturbance is related to the degree of hearing loss. However, a note of caution must be added. While the hearing of the profoundly deaf was significantly poorer than that of the partially hearing, transfer to a school for the profoundly deaf could occasionally have been influenced by social and behavioural criteria in the small number of marginal cases who could have easily fallen into either of the two deaf groups. Nevertheless, we do not consider that there are sufficient of these cases to produce differences of this magnitude; most of the differences are likely to be determined by the severity of deafness itself. These findings are not consistent with those of other workers such as Bowyer and Gillies (1972), but the studies are not really comparable as they have not used standardized tests covering the wide range of behaviours we have studied but rather a form of clinical impression consisting of judgement, by a variety of teachers, on two questions, namely, 'the ability to get on with other children' and 'the ability to get on with adults'. It is to be noted that the rate of psychiatric disturbance on the behaviour questionnaire we have used is from one and a half to three times as great as in the control group (see Table II) and therefore is broadly similar to Schlesinger and Meadow's (1972) findings using a teacher questionnaire. In addition our findings indicate that such disturbance more often than not tends to be of an antisocial variety.

When looking at peer relationships, the profoundly deaf especially, and to a lesser extent the partially hearing, appear to be worse off. The profoundly deaf subjects have significantly fewer peer contacts and are more teased and bullied than their hearing counterparts. The partially hearing subjects are also significantly more teased. Teasing and bullying by the hearing children seem to be important factors in accounting for the poorer peer relationships of the deaf. However, deafness itself must have played a part as it is entirely within expectation that certain children with communication difficulties will tend to be embarrassed by their poor speech, and also that poor speech itself will limit their ability to make satisfactory relationships.

The greater temperamental irregularity (patterns of eating and sleeping), may also stem from communication difficulties between the parents and their children. It could be argued that parents of the deaf have greater difficulties in communicating to their deaf children precisely what behaviour is expected of them at mealtimes or bedtimes, but these temperamental anomalies could also be explained by the previous finding that parents are more strict with them than with normal hearing children. It may simply be that they expect greater regularity or instantaneous obedience from them as ways of forestalling any dangers. The greater moodiness of the partially hearing may be a consequence of frustration caused by impatience with their difficulty in verbal communication. There is no simple plausible explanation of why moodiness

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is greater in the partially hearing than in the profoundly deaf group. On the other hand, impaired hearing is often associated with organic brain dysfunction and this might have contributed to the excess of moodiness and irregularity among the hearing-impaired children. However, our present findings provide no clues as to the relative contribution that communication difficulties and/or organic factors might have made to the behavioural problems displayed by the children.