Attentional and activity difficulties: findings from a national study

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The within-child/environmental causes of emotional and behavioural difficulties continue as a matter of debate and concern among teachers, parents and researchers. The contribution made here by Brahm Norwich, Paul Cooper and Pam Maras is much welcomed on this account. Their recent research indicates the extent of unidentified problems and the need for systematic assessment procedures and for the multidisciplinary involvement of education, health and social services.

Introduction

In this article we outline the results of a national study of pupils’ attentional and activity difficulties which we conducted as the first part of an ESRC-funded project. The overall aim of the study was to explore children’s and adults’ perceptions and attributions about these difficulties. We were particularly interested in whether the perceptions and attributions of parents and teachers were influenced by the kind of provision the child had experienced within the education, social or health service. The outcomes of this full study will be published in another paper. However, the findings from the initial survey are relevant to continuing issues about the nature and incidence of emotional and behavioural difficulties (EBD) on one hand, and attention deficit/hyperactivity disorder (AD/HD) on the other.

There are many ways of conceptualising EBD which are sometimes conflicting. These draw on a wide range of theoretical and disciplinary bases, including: educational–therapeutic approaches (e.g. Charlton and David, 1995; Cooper, Smith and Upton, 1994; Farrell, 1995); social models (e.g. Slee, 1995); mental health models (e.g. Rutter, 1975; Connors, 1975); biologically-based perspectives (e.g. Rutter, 1996); as well as being influenced by a quasi-judicial disciplinary perspective as promoted, for example, by the policies of the National Association of School Masters/Women Teachers. The widespread growth in awareness of the medical diagnosis of AD/HD in the UK, particularly among parent pressure groups, has raised awareness of the tensions between these often competing ways of understanding and explanations. In some cases, professionals and parents find themselves on opposite sides of a debate about the validity of within-child, as opposed to environmental, explanations of the causes of EBDs (Boreham, Peers, Farrell and Craven, 1995; Slee, 1995; Cooper, 1997; Prior, 1997a; 1997b; Visser, 1997).

AD/HD is a medical diagnosis of the American Psychiatric Association. It is characterised by chronic and pervasive (to home and school) problems of inattention, impulsiveness, and/or excessive motor activity which have seriously debilitating effects on individuals’ social, emotional and educational development, and are sometimes disruptive to the home and/or school environment. Between two and five per cent of British school children are believed to experience this condition (BPS, 1997). The coming of this diagnosis has revived traditional conflicts between medical and educational perspectives on EBD, which affect the way in which practitioners approach problems surrounding childhood attention and activity problems (for example, see Cooper and Ideus, 1995).

There are considerable differences in the reported incidence; up to 9% of US children diagnosed as AD/HD in certain regions compared to only 0.007% in the UK (Hinshaw, 1994; Prendergast et al., 1988, Schachar, 1991, Taylor, 1994; Holowenko and Pashute, 2000). These variations reflect several factors, including how the diagnostic systems are interpreted and used in practice by professionals, and cultural practices as regards diagnosis in this field. There are, however, few large-scale studies of the incidence of the specific behaviours which form the basis for diagnosing AD/HD in this country. The study, reported in this paper, focused on the incidence of attentional and activity difficulties. It had the following research questions:

1. How many, among a representative sample of children in three geographical areas of England, are defined by their parents and teachers as exhibiting severe attentional and activity problems which might be consistent with the AD/HD diagnosis, and what other social, emotional and behavioural problems do they exhibit?
2. Which of these children have been diagnosed medically as having a disorder, such as Hyperkinetic Syndrome or AD/HD?

3. What proportion of identified children are also recorded as having SEN at stage 3 (of the Code of Practice) or have a statement?

4. Which identified children have been excluded or have a history of temporary and/or permanent exclusion (formal and/or informal)?

5. What is the pattern of achievement as indicated by National Curriculum assessments in mathematics and English of these children?

Methods

Design

The survey was in two stages. The first stage involved a large postal survey of parents and teachers of a targeted population of school children. At stage two, follow-up questionnaires were designed to ascertain information, including educational attainments, diagnosis and/or identification of medical and other disorders, experience of social services provision relating to the child, and special education provision in the form of individual education plans (IEPs) or statements.

Table 1: Sampling frame

<table>
<thead>
<tr>
<th>Six LEAs in 3 REGIONS</th>
<th>70 SCHOOLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Level of Achievement (GCSE/SAT)</td>
</tr>
<tr>
<td>45 Primary</td>
<td>15 High, 15 Medium, 15 Low</td>
</tr>
<tr>
<td>45 Secondary</td>
<td>15 High, 15 Medium, 15 Low</td>
</tr>
<tr>
<td>10 Special (NC 4, 5, 9)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Participants

A stratified random sampling procedure was used to identify children with attention and activity difficulties based on geographic area, achievement levels and age of children. Two LEAs in each of three areas were included in the study, to represent different regions and urban/rural settings, in the Northwest, Midlands and Southeast. As Table 1 shows there were 70 schools involved. This included ten special schools (covering EBD and MLD special schools), 45 primary and 15 secondary schools. Participation of the children was based on parental permission which was secured by sending letters through the schools. These assured parents that their children would remain anonymous to the researchers and that results would be confidential. All the children in the special schools in Years 4, 5 and 9 were included in the sample. Of the primary schools, 15 were randomly selected from the LEA’s school list to reflect overall National Curriculum assessment performance that was high, medium and low with reference to LEA standards. The secondary schools were also randomly selected with five selected to reflect overall high, medium and low GCSE performance levels. Parents and teachers of children in Years 4, 5 and 9 completed a short questionnaire in respect of the children.

Measures

Teacher and parent versions of the Goodman ‘Strengths and Difficulties Questionnaire’ (SDQ) (Goodman, 1994; 1997; 1999) were used. The SDQ is a behavioural screening tool of 25 statements that comprise five scales – five statements per scale. Table 2 shows the range of scales with item examples and the five hyperactivity statements. This measure was used because it covers a wide range of areas of emotional and behavioural adjustment, includes strengths and difficulties, has been extensively evaluated and is simple to use.

Table 2: Examples of scale items SDQ (Goodman, 1997)

<table>
<thead>
<tr>
<th>Examples of statements</th>
<th>Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. considerate of others</td>
<td>Prosocial scale</td>
</tr>
<tr>
<td>e.g. often unhappy</td>
<td>Emotional Symptoms Scale</td>
</tr>
<tr>
<td>e.g. fights a lot</td>
<td>Conduct Problems Scale</td>
</tr>
<tr>
<td>e.g. often fights with other children or bullies them</td>
<td>Peer Problems Scale</td>
</tr>
</tbody>
</table>

The extended version of the SDQ (Goodman, 1999) asks respondents to declare whether or not they perceive the young person to have ‘a problem’ (burden) and, if so, to report on its duration (chronicity), as well as the degrees of distress, social impairment (impact) and burden on others attributed to the problem. These factors are particularly salient to parents and teachers (Goodman, Meltzer and Bailey, 1998). The judgement of ‘burden’ has been found to be the single best predictor of service contact.

In stage two, questionnaires were specially designed for the parents and teachers of the children who were identified relative to the Goodman national norms as having a hyperactivity difficulty. The parent questionnaire covered, amongst other areas, whether the child had any medical/psychiatric diagnoses and treatment and had received any social services provision. The teacher questionnaire covered, amongst other areas, the most recent National Curriculum attainment levels, exclusion data for the last
two years and whether the child received special educational provision at stage 3 or through a statement. These were taken as indicating more severe levels of special educational needs.

Results

Response rates

7387 SDQs were returned (3850 parents, 3537 teachers). Parent and teacher data were obtained for 1962 children. The overall response rate was 52% (teachers 54%, and parents 50%). Response rates for high-achieving schools were generally higher than for low- or medium-achieving schools. Data for the hyperactivity scales were found to be internally consistent for both parents and teachers (Cronbach alphas 0.8 and 0.9 respectively).

Agreement between parents and teachers

Data were analysed to identify the number of children identified and the correlation between the five scales and between parents’ and teachers’ SDQ responses (Table 3).

<table>
<thead>
<tr>
<th>Scales</th>
<th>Strengths and Difficulties Questionnaires</th>
<th>Correlation parent and teacher scale ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>By parents</td>
<td>By teachers</td>
</tr>
<tr>
<td>Conduct</td>
<td>519</td>
<td>440</td>
</tr>
<tr>
<td>Emotion</td>
<td>526</td>
<td>235</td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>611</td>
<td>592</td>
</tr>
<tr>
<td>Peer problems</td>
<td>350</td>
<td>311</td>
</tr>
<tr>
<td>Prosocial behaviour</td>
<td>171</td>
<td>702</td>
</tr>
</tbody>
</table>

* p = <0.01

Table 3: The number of children identified and correlation between parents and teachers on the five SDQ scales

Correlational analysis showed that children who showed more hyperactivity difficulties in the view of their parents also tended to show more conduct, emotional and peer problems, and less prosocial behaviour. For their teachers, those showing more hyperactivity difficulties also tended to show more emotional difficulties and peer problems. Table 3 shows a correspondence between parents’ and teachers’ ratings in the areas of emotional difficulties, hyperactivity difficulties and prosocial behaviour, but not in peer problems nor conduct difficulties. Table 3 also shows the number of pupils identified as having difficulties in the five areas by parents and teachers. Where there is a significant correlation between parent and teacher scale ratings (emotional, hyperactivity and prosocial behaviour), there is a greater overlap in the numbers of pupils identified than in the areas where there is no significant correlation (conduct and peer problems).

It was also found for teachers and parents that difficulty ratings on all five scales were correlated significantly with ratings of the duration (chronicity), impact and burden of the children’s difficulties. However, when the sample was separated into those with hyperactivity difficulties and those without, a difference was found between teacher and parent ratings. Those children identified by teachers as having hyperactivity difficulties had significantly (p<0.01) higher impact, chronicity and burden scores than those without. By contrast, for children identified with hyperactivity difficulties by their parents, impact, chronicity and burden scores were not significantly different from children not identified.

Hyperactivity group

The 611 and 591 children identified as having hyperactivity difficulties by parents and teachers respectively represented 17% of the total number of children in the parent and teacher samples. However, these were mostly a different 17%, as only 147 children scored in the difficulty range by both parents and teachers.

Profile of hyperactive groups

Parent and teacher hyperactive groups were compared with the parent and teacher non-hyperactive groups. Both parents and teachers identified significantly more boys than girls as being hyperactive (parents – 73% boys vs. 27% girls; teachers – 72% boys vs. 28% girls).

Children identified as hyperactive by both teachers and parents had had significantly more permanent exclusions than children not identified as hyperactive (for parents, 1.4% with hyperactivity difficulties permanently excluded versus 0.2% of those no difficulties; for teachers, 1.0% with hyperactivity difficulties permanently excluded versus 0.2% of those with no difficulties).

Children identified as having hyperactivity difficulties by both teachers and parents also had significantly lower levels of National Curriculum attainment in both maths and English (p<0.01). For example, 35.8% of those with hyperactivity, identified by parents, scored at level 4 or above in English compared to 53.2% of those with no hyperactivity. For teacher-identified hyperactivity difficulties, the corresponding percentages were 32.2% compared to 51.2%. Similar differences were found for mathematics.

Involvement with different kinds of provision

In phase two we identified four subgroups of those children rated as having hyperactivity difficulties as identified by parents or teachers (310 children) in the first phase. The second phase parent questionnaire gave information about whether children had received a psychiatric diagnosis of AD/HD and/or social services provision. The second phase teacher questionnaire gave information about whether the children were receiving special education provision at stage
3 or through a statement. A total of 97 children were identified, for whom there were complete data sets. Of these 27 were found to have received one or more kinds of provision (see Figure 1). The 97 fell into the following subgroups:

1. Children receiving no provision (as defined) (n=70) – 72.2%.
2. Children with experience of psychiatric provision; with AD/HD label (n=6) – 6.2%.
3. Children receiving other provision (i.e. social services, stage 3 SEN Code of Practice and statements) (n=21) – 21.6%.

![Figure 1: Distribution of cases by provision received](image)

This breakdown shows that there was one child with only an AD/HD diagnosis. The majority of individuals with this diagnosis had it in conjunction with experience of one or more other kinds of provision (see Figure 1).

**Discussion**

In this brief paper we summarise some of the key findings of the first stage of our ESRC project on children with attentional and activity difficulties. The response rate of 52% shows that we did not have emotional and behavioural ratings for a large proportion of the total child sample identified. This arose partly because some schools were unable, despite support from the research team, to arrange for teachers to complete forms and/or send forms by post to parents. Some parents also did not return forms despite agreeing to participate in the study. We found response rates to be slightly higher for children in higher than lower attaining schools. If it is assumed that reported hyperactivity levels are higher in lower attaining schools, then our incidence levels may be underestimates.

Despite the 52% return rate, the sample represented a wide range of regional, LEA and school variations. For this reason we believe that the study points to some important and interesting aspects of the phenomenon of children with activity and attentional difficulties. The overall incidence of these difficulties, as measured by the Goodman SDQ hyperactivity scale, was 17% when rated separately by parents and teachers. For children for whom we had both parent and teacher data, we found that 7.5% had these difficulties at home and school. This reduced incidence across home and school is consistent with the moderate correlation between teacher and parent scores found in this and other studies. It illustrates the well-known phenomenon of situation specificity in emotional and behavioural difficulties. Children who present attentional and activity difficulties at school might not show them to a significant degree at home and vice versa.

We also found significant correlations between other kinds of emotional and behavioural difficulties and hyperactivity difficulties. However, this was more so for parents’ than teachers’ identifications. This finding is related to what psychologists call co-morbidity. This association between attentional and activity difficulties and other difficulties, such as emotional and peer problems, is very relevant to teachers’ expectations and their understanding of children’s emotional and behavioural functioning. Discrete terms like hyperactivity or AD/HD might lead us to believe mistakenly that difficulties identified in terms of these labels are unconnected to other kinds of difficulties.

We also found an interesting difference between teachers and parents in how they responded to children’s difficulties in terms of their perceptions of the burdens associated with the difficulties, of the duration of the difficulties and the degree of impact of the difficulties on the child’s everyday functioning. Teachers perceived more burdens, greater duration and more impact than parents. This difference can be interpreted as another aspect of the situation specificity of these kinds of difficulties. It might be due to the greater difficulties experienced by teachers in coping with individuals in the context of large classes of children compared to smaller numbers of children in families. It might also be related to differences in behavioural expectations between class and home.

In this analysis we focused on three aspects of the group with hyperactivity difficulties: gender, permanent exclusions and school attainments. We found the expected bias towards more boys than girls with hyperactivity difficulties, about two and a half times more in boys. We also found more permanent exclusions and lower National Curriculum attainment levels in the group with hyperactivity difficulties. These findings show that attentional and activity difficulties have consequences for children’s progress in learning and their continued inclusion in mainstream schools.

Our study is similar in some respects to a recent UK study by Merrell and Tymms (2001) in which they examine the impact of inattentive, impulsive and hyperactive behaviours (not diagnosed as AD/HD) on school attainment in Key Stage 1. They used a scale based on psychiatric classification which identified children with high scores in the three areas referred to above. They found an incidence of 11.2% of their sample to be high in one or more of these areas, which is below the 17% we identified by parents and teachers separately and higher than the 7.5% we identified jointly. They also found the same gender bias and the relationship between high scores and lower attainment.
Our study differed in considering both teacher and parent ratings across different age groups. We started off with 1055 children who were identified by parents or teachers via the SDQ hyperactivity scale. Of these we obtained parental permission to collect further data for 310 children, representing about 30% of those identified. And, from these children, we were able to collect full data for some 31% or 97 children. Our study was not planned to provide a full picture of the incidence of AD/HD. However, we did find that for these 97 children with significant attentional and activity difficulties only six children, or 6.2%, had AD/HD diagnoses, and of these six children, only one had an AD/HD diagnosis without social services or special education provision. By contrast, 25 children (26%) with hyperactivity difficulties were receiving special education, either in the form of SEN Code of Practice stage 3 or through a statement. By far the largest proportion, 72.2%, were not receiving provision from any of the three statutory services.

The full extent of unidentified and unmet needs in relation to these kinds of difficulties cannot be determined from this study. It may be that some children in this 72.2% would not turn out to have persistent and severe difficulties. But even if, say, only half the group turned out to have persistent and severe difficulties, this would still indicate a substantial degree of unidentified difficulties. There is no implication that greater identification of difficulties would require greater diagnosis of AD/HD. The assessment of AD/HD requires careful and systematic procedures and multidisciplinary involvement (BPS, 2000). Other sources of the difficulties might be identified that require other forms of interventions and support. Although this study was not primarily planned to establish estimates of the incidence of attentional and activity difficulties nor of AD/HD, we believe that what we have found has wider interest and relevance for teachers, for those who manage the education service and to the health and social services. We believe along with Merrell and Tymms (2001) that schools could actively monitor the emotional and behavioural functioning of their pupils with a measure, such as the Goodman’s SDQ or some other well-constructed inventory.

References


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