

# Characteristics and experiences of children and young people with severe intellectual disabilities and challenging behaviour attending 52-week residential special schools

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## Abstract

**Background** This study sought to gather information about the characteristics and experiences of children and young people with severe intellectual disabilities and severe challenging behaviour attending 52-week residential special schools.

**Method** Staff of nine schools completed postal questionnaires on the characteristics and experiences of 156 pupils.

**Results** Those attending residential schools are predominantly male, teenagers and in long-term placements. Most have limited communication skills and autistic spectrum disorders. All display high numbers of challenging behaviours, many of them serious. Children have a greater range and complexity of needs than pupils at day severe learning difficulties (SLD) schools, albeit with some overlap.

**Conclusions** Children at 52-week residential schools present needs that both families and local services struggle to meet. Residential placement may provide the intensity of educational input and social support that is required, but may increase the vulnerability of

the children. Local alternatives to residential schools should be investigated.

**Keywords** challenging behaviour, intellectually disabled children, residential schools

## Introduction

Both in education and in health and social care, children and young people with intellectual disabilities (ID) are increasingly 'included' in mainstream provision. Yet inclusion is not without its casualties. Kiernan & Kiernan (1994) estimated that about 35 children move from local severe learning difficulties (SLD) special schools to residential provision each year in England and Wales because of problem behaviour. Children who, 30 years ago, would probably have been included in the then over 4000 population of those under 15 years in long-stay hospitals (National Development Group for the Mentally Handicapped 1977), now live with their families for whom support services often remain poor quality, unsuitable or inaccessible (Hubert 1991; Mental Health Foundation 1997).

Consequently, often for a combination of educational and social reasons (Pahl & Quine 1985; Abbott *et al.* 2001; McGill *et al.* 2006), each year a number of children enter into residential special schools that

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provide 52-week care. Placements in such schools raise a number of concerns. First, they fly in the face of government policies that have recognized and legislated for the right to education in mainstream and inclusive (and, by implication, local) schools (Male 1998). Second, Morris (2002) has argued that the placement of disabled children in residential schools, without proper consultation and monitoring, may breach the 1989 United Nations Convention on the Rights of the Child. Third, in the absence of clarity about the 'looked after' status of children attending residential schools (Abbott *et al.* 2001), the care and education received by children may be very little monitored, especially where placements are arranged and funded entirely by Education Authorities. Such children are therefore at some risk especially when their distance from their family may contribute to limited contact with their parents (McGill *et al.* 2006).

Additionally, as noted in *Valuing People* (Department of Health 2001), we know very little about the children attending such schools, their and their families' experiences, and the outcomes of such placements. The available information is based mainly on three studies. Emerson (Emerson *et al.* 1996; Robertson *et al.* 1996) retrospectively reviewed the progress made by children who attended Beech Tree School, a 52-week residential school in the North of England. The study combined a review of written records with parental interviews and found evidence of significant improvements in self-care, communication and challenging behaviour during the child's stay, which were largely maintained after leaving the school. When they left Beech Tree, the largest number went to another residential special school, with a smaller number returning to their families or going into other forms of residential care. At the time the study was carried out, 82% of the school's former pupils were in various forms of residential care. 72% of parents were very satisfied with Beech Tree, and 76% were very satisfied with their child's current placement. Almost 1 in 5 parents reported that the main reason for their child going to Beech Tree had been their local special school's inability to cope with their child's behaviour. A total of 41% gave the main reason as being their own difficulty coping.

In the second study, Abbott *et al.* (Abbott *et al.* 2000, 2001; Morris 2003) gathered information from 21 local authorities and explored the situation

in more depth in four of these. This was a study of all disabled children attending all residential schools so that many of the children did not have learning disabilities or challenging behaviour, although 'severe learning difficulties' and 'autism' were the most frequent categories of primary special educational need. The study found wide variations between local authorities in the number of children placed and the extent to which placements were only for the normal school year or were of 48/52-week duration. There were mixed views of the reasons for residential school placements, with many Local Education Authorities seeing them as entirely for social reasons but many parents noting bad experiences in local special and mainstream schools. The children themselves were often not consulted about their views or were deemed to be too disabled to offer any. Interviews with some of the children found mixed experiences, with many expressing homesickness but some reporting that residential school allowed them to make friends and be more independent.

In the third study, McGill *et al.* (2006) surveyed the parents of children with severe ID and challenging behaviour currently attending 52-week residential schools. Parents were critical of services and supports received prior to their child's entry into residential education and reported high rates of exclusion from local services. Residential schools were generally perceived as providing a good quality of service, although considerable concern was expressed about their geographical distance from the family home and this had a significant impact on the frequency of visits. Parents expressed high levels of concern about the future care and support needs of their children.

Other work (Department for Education and Skills Department of Health 2004; South Central Regional Inclusion Partnership 2004, 2005; Pinney 2005) is difficult to interpret because of the range of special needs and types of residential placements that are included and the limits of the statistical information on which they are based. Hampford & Collins (2002) interviewed families and local authority representatives, with a specific focus on children with learning difficulties who have 'challenging and complex needs' but provide no information about the numbers involved, their characteristics or the methods used.

The aim of the current study is to help fill some of the very apparent gaps in knowledge about 52-week residential special schools and their population, in particular to:

- 1 identify the characteristics of children and young people attending the schools;
- 2 draw comparisons with the characteristics of other groups of children and young people, as described in previous studies; and
- 3 identify some aspects of the experiences of children and young people at residential schools, also in comparison with other studies.

## Materials and methods

### Procedure and participants

All the schools known to the authors in the UK that provided 52-week residential placements for children with severe learning disabilities and challenging behaviour were asked to participate in the study. Of the 16 schools approached, nine agreed to participate. The schools that agreed to participate were broadly similar to those that did not. Both groups came from a wide geographical spread and had a similar average size. Almost all in both groups identified their remit as the provision of services for children and young people with severe learning disabilities and/or autism and/or challenging behaviour. Both groups included schools run by charities and by private organizations. The participating schools included one run by the National Autistic Society and one run by a Jewish charity. It is possible therefore that the sample may over-represent the number of children either with autistic spectrum disorder or from a Jewish background. However, it should be noted that 13 of the 16 schools identified autistic spectrum disorder as one of the main special needs for which they provided. The total population of the 16 schools was estimated to be 494, with 234 (47%) placed at the nine participating schools. The nine schools were therefore sent sufficient questionnaires for one to be completed on each eligible pupil. Schools were asked to arrange for questionnaires to be completed by each pupil's class teacher or key worker. Subsequently, 156 completed questionnaires were returned by participating schools, 67% (range: 42–100% across participating schools) of the sample or 33% of the original target population.

### Measure

The four-page questionnaire (available from the authors on request) was designed to be completed primarily by ticking boxes or marking points on Likert scales, to maximize completion rate. Topics covered were:

- background and demographic information (age, gender, ethnic origin, length of time at school, religion);
- nature of disabilities (syndrome, vision, hearing, communication);
- challenging behaviour (ratings of severity of 13 different behaviours);
- interventions/support strategies (medication, physical intervention, key worker);
- frequency of access to a range of health and social care services and participation in a range of community and leisure activities; and
- specifically educational arrangements (e.g. size of class).

As far as possible questions were drawn up to be comparable with those used in relevant previous studies. One of the questions on communication was drawn from the Behaviour Development Survey (Conroy & Bradley 1985), the questions on challenging behaviour came from McGill *et al.* (2006), the questions on physical intervention came from Murphy *et al.* (2003), and the questions on service access and community participation were based on the Guernsey Community Participation and Leisure Assessment (Baker 2000). The questionnaire was piloted with key workers and teachers from a 52-week residential school known to the authors.

## Results

### Respondents

Schools that responded averaged 26 (range: 10–48) pupils, and were widely dispersed throughout England and Wales.

### Characteristics of children and young people

#### *Background and demographics*

A total of 77% were male, and 23% female. Average age was 15.1 years (range: 8–19), and the average length of their stay at their current school was 3 years

4 months (range: 1 month–11 years). In total, 82% of the sample was white, 7% Asian, 6% black and 5% other. A total of 62% were described as Christian, 22% unknown religion, 6% Jewish, 4% Muslim, 4% Hindu and 1% other religion. Table 1 shows these data compared with those found in other studies and government statistics. In comparison with Kiernan & Kiernan (1994), pupils in the current study were significantly more likely to be male than either pupils

attending day SLD schools ( $\chi^2 = 21.4$ , d.f. = 1,  $P \leq 0.001$ ) or the 'more difficult' group attending such schools ( $\chi^2 = 5.8$ , d.f. = 1,  $P \leq 0.025$ ). The proportion of pupils from black, Asian and other ethnic minorities (18%) was significantly higher than the comparable proportion (12%) of the national population of 0–15 years in 2001–2002 ( $\chi^2 = 5.6$ , d.f. = 1,  $P \leq 0.025$ ). The distribution of religions reported was compared with the national distribution in the 2001

**Table 1** Background and demographic characteristics of children and young people across selected studies

Sample	Gender (Male/female)	Mean age (range) (years)	Mean Length of stay at time of study (years)	Ethnic background	Religion
Pupils in 52-week residential school placements ( $n = 156$ ) (current study)	77%/23%	15.1 (8–19)	3.3	82% White, 7% Asian, 6% Black, 5% Other	62% Christian, 22% unknown, 6% Jewish, 4% Muslim, 4% Hindu
Pupils in 52-week residential school placements ( $n = 73$ ) (McGill <i>et al.</i> 2006)	74%/26%	15.2 (8–19)	Not known	90% White, 6% Asian, 1% Black, 3% Other	Not known
Previous pupils at one 52-week residential school placement ( $n = 55$ ) (Emerson <i>et al.</i> 1996)	75%/25%	13.4 (7–18)*	1.25 <sup>†</sup>	85% White, 11% Asian, 4% Black	Not known
Pupils attending SLD day schools ( $n = 1029$ ; $n = 367$ for 'more difficult' group) (Kiernan & Kiernan 1994)	57%/43% <sup>‡</sup> (66%/34% for 'more difficult' group)	Median in range 13–14 <sup>§</sup> (1–4–19–20) (same for more difficult group)	Not known	Not known	Not known
Government/census statistics <sup>¶</sup>	51%/49%	Not applicable	Not applicable	88% White, 5% Asian, 3% Black, 4% Other	72% Christian, 24% Unknown, 0.5% Jewish, 3% Muslim, 1% Hindu

\*At the time of this study, all children had left the school. Age at which they started the school and duration of stay are given, however, so that age has been estimated on the basis of the mid-point of their stay.

<sup>†</sup>Estimated on the same basis as above. Actual average length of stay was 2.5 years (range: 0.4–5.2).

<sup>‡</sup>The data given in the original paper are 57%/47%. It is assumed here that this was a typographical error and, as the number of 57% for percentage of male is repeated elsewhere in the paper, the error was in the percentage of female.

<sup>§</sup>Estimated from figure 2 in the original paper.

<sup>¶</sup>Data on gender and religion come from the 2001 Census (<http://www.statistics.gov.uk/census2001>). The breakdown of gender is for the age range 5–19 in the UK. The breakdown of religions is for the UK population as a whole. Data on ethnic background by age come from dataset LIB0316 (<http://www.statistics.gov.uk>) and refer to the distribution of ethnic backgrounds in the age range of 0–15 years in 2001–2002. SLD, severe learning difficulties.

Census. Distributions were significantly different ( $\chi^2 = 119.9$ , d.f. = 4,  $P \leq 0.001$ ), with raised percentages of Jewish, Muslim and Hindu religions in the current sample.

### Disabilities

A total of 75% of the sample were reported to have an autistic spectrum disorder. In total, 88% were independently mobile, and 12% used a wheelchair and/or walking aid. A total of 92% were reported to have normal vision, with 6% having poor vision and 2% being blind or almost blind. In total, 97% were reported to have normal hearing, with 3% having poor hearing. A total of 36% used speech as their

main method of communication, the remaining 64% using one of a wide range of formal and informal methods. The prevalence of use of verbal and non-verbal communication modes is shown in Table 2.

Table 3 shows these data compared with those found in other studies. Communication is not included, as the measures used in different studies were not meaningfully comparable.

Given the well-known gender imbalance in autistic spectrum disorders, male and female participants were compared, confirming that male participants were significantly more likely to be reported to have an autistic spectrum disorder ( $\chi^2 = 11.5$ , d.f. = 1,  $P \leq 0.001$ ). Wing & Gould (1979) identified the prevalence of social impairment (autistic spectrum disorder).

**Table 2** Verbal and non-verbal communication use

Verbal communication	% of sample	Non-verbal communication	% of sample
Speech easily understood	23	Gestures	53
Speech somewhat difficult to understand	17	Signing	45
Speech very difficult to understand	11	Objects of reference	37
No understandable speech but makes sound	46	Photos/pictures	49
Makes no sound	2	Symbols	55
		None	3

**Table 3** Disabilities of children and young people across selected studies

Sample	Reported prevalence of autism (%)	Reported independently mobile (%)	Reported prevalence of visual impairment (%)	Reported prevalence of hearing impairment (%)
Pupils in 52-week residential school placements ( $n = 156$ ) (current study)	75	88	8	3
Pupils in 52-week residential school placements ( $n = 73$ ) (McGill <i>et al.</i> 2006)	59	Not known	26	14
Previous pupils at one 52-week residential school placement ( $n = 55$ ) (Emerson <i>et al.</i> 1996)	20	84	11*	11*
Pupils attending SLD day schools ( $n = 1029$ ) (Kiernan & Kiernan 1994)	Not known	85	17 <sup>†</sup>	11 <sup>‡</sup>

\*Number not broken down in original study. This is 'impaired vision or hearing'.

<sup>†</sup>Calculated from the data given on pp. 184–5 of the original paper.

<sup>‡</sup>Calculated from the data given on pp. 184–5 of the original paper.

SLD, severe learning difficulties.

der) at different levels of intelligence, but accurate extrapolation of their findings to the current study would require more detailed knowledge of the level of learning disability of the participants. Assuming they do all have severe or profound ID as defined by and in the same proportions as found by Wing & Gould (IQ less than 35), 70% would be expected to be socially impaired. This is not significantly different from the current study ( $\chi^2 = 0.6$ , d.f. = 1, NS). In education, however, the term 'severe learning difficulties' often refers to an IQ below 50. Wing & Gould's data suggest that 56% of such a group would be expected to be socially impaired, and this is significantly less than the prevalence found ( $\chi^2 = 10.1$ , d.f. = 1,  $P \leq 0.01$ ). The reported prevalence of autistic spectrum disorder was also significantly higher than that reported by McGill *et al.* (2006) ( $\chi^2 = 6.1$ , d.f. = 1,  $P \leq 0.025$ ) or Emerson *et al.* (1996) ( $\chi^2 = 51.5$ , d.f. = 1,  $P \leq 0.001$ ). There were no significant differences across studies in the proportion reported independently mobile ( $\chi^2 = 1.2$ , d.f. = 2, NS). Visual impairment was reported significantly less often than in either McGill's ( $\chi^2 = 13.9$ , d.f. = 1,  $P \leq 0.001$ ) or Kiernan's ( $\chi^2 = 8.5$ , d.f. = 1,  $P \leq 0.01$ ) samples. Similarly, hearing impairment was reported significantly less frequently in the current sample (vs. McGill:  $\chi^2 = 8.1$ , d.f. = 1,  $P \leq 0.01$ ; vs. Kiernan:  $\chi^2 = 9.6$ , d.f. = 1,  $P \leq 0.01$ ). The proportion of children reported by Emerson with impaired vision or hearing was not significantly different from the equivalent in the current sample ( $\chi^2 = 0.0$ , d.f. = 1, NS).

#### Challenging behaviour

Ratings of the occurrence and severity of challenging behaviour are shown in Table 4. Unsurprisingly, given the nature of the sample, all but two pupils were rated as displaying a number of challenging behaviours. Aggression was the most commonly reported 'serious' problem (24%). On average, children were reported to be displaying 10.8 different forms of challenging behaviour (range: 0–14).

Table 5 shows comparisons with other studies. A higher proportion of children and young people in the current sample were rated as having a serious problem of aggression than in either Kiernan's (Kiernan & Kiernan 1994) (whole school:  $\chi^2 = 85.0$ , d.f. = 1,  $P \leq 0.001$ ; 'less difficult':  $\chi^2 = 4.0$ , d.f. = 1,  $P \leq 0.05$ ) or Harris's (1993) ( $\chi^2 = 7.9$ , d.f. = 1,

**Table 4** Ratings of occurrence and severity of challenging behaviours (ratings of severity made on 5-point scale where 1 = 'displays the behaviour but causes minimal problems' and 5 = 'displays the behaviour and causes a serious problem')

Behaviour	% of sample reporting	Mean rating
Non-compliance	95	3.3
Social disruption	93	3.1
Aggression	91	3.3
Temper tantrums	90	3.3
Physical disruption	89	3.2
Self-injury	84	2.8
Destruction	83	2.8
Stereotypy	82	3.0
Rituals	78	3.1
Wandering	78	2.8
Sleeping problems	77	2.1
Inappropriate sexual behaviour	77	2.4
Hyperactivity	72	2.6
Other	18	3.6

$P \leq 0.01$ ) samples of children attending SLD day schools. The 'more difficult' pupils in Kiernan's sample, however, were more likely to display aggressive behaviour ( $\chi^2 = 15.0$ , d.f. = 1,  $P \leq 0.001$ ). Comparisons with the other residential school samples showed no difference with McGill *et al.*'s (2006) sample ( $\chi^2 = 1.0$ , d.f. = 1, NS), but significantly more pupils with serious aggression in Emerson's single school sample ( $\chi^2 = 30.6$ , d.f. = 1,  $P \leq 0.001$ ). Statistical comparisons in respect of number of challenging behaviours displayed also show that both the residential school samples have higher average numbers than all the day school samples (e.g. current sample vs. Kiernan more difficult group by one sample *t*-test:  $t = 25.9$ , d.f. = 155,  $P \leq 0.001$ ).

#### Intervention/support

A total of 28% of the sample were reported to take medication to control their epilepsy, 28% for 'behaviour management' (including regular and/or PRN medication and excluding those who may have been taking PRN medication for the management of seizures), and 6% for sleep management. In some cases, respondents identified the type of medication being taken. Out of 30 such cases, 20 reported the use of Risperidone, with other medications (paroxetine,

**Table 5** Challenging behaviours of children and young people across selected studies

Sample	Aggressive behaviour	Average number of challenging behaviours
Pupils in 52-week residential school placements ( <i>n</i> = 156) (current study)	91%; 24% 'serious problem'	10.8
Pupils in 52-week residential school placements ( <i>n</i> = 73) (McGill <i>et al.</i> 2006)	30% 'serious problem'	10.5
Previous pupils at one 52-week residential school placement ( <i>n</i> = 55) (Emerson <i>et al.</i> 1996)	66% 'serious' (point of entry)	Not known
'More difficult' pupils attending SLD day schools ( <i>n</i> = 367) (Kiernan & Kiernan 1994)*	43%	4.1
'Less difficult' pupils attending SLD day schools ( <i>n</i> = 662) (Kiernan & Kiernan 1994)*	17%	1.7
Sample of all pupils attending SLD day schools ( <i>n</i> = 4635) (Kiernan & Kiernan 1994)*	5.7%	0.6
Pupils attending SLD schools in single health district ( <i>n</i> = 206) (Harris 1993)	12.6%	Not known

\*Data calculated from tables 2 and 3 in Kiernan & Kiernan (1994).  
SLD, severe learning difficulties.

**Table 6** Responses to challenging behaviour

Type of response	Daily (%)	Weekly (%)	Monthly (%)	Yearly (%)	Never (%)
Protective devices	10.9	5.1	2.2	4.3	77.5
PRN (medication)	7.2	3.6	5.8	5.1	78.3
Seclusion (observation in secure room)	5.0	13.7	8.6	2.9	69.8
Physical intervention (e.g. restraint)	18.5	18.5	25.2	6.6	31.1

sulpiride, chlorpromazine, olanzapine, lorazepam, fluoxetine) being used by a small number. Melatonin was the only medication noted in use for sleep management.

The frequency of use of various responses to challenging behaviour is shown in Table 6.

A total of 63% of pupils were reported to have a formal, written procedure for physical restraint. Seventeen pupils (eight of them at least weekly) were reported to be subject to physical intervention without the use of a written procedure. Table 7 shows comparisons with other studies. A comparable proportion of pupils in the current sample was taking medication for behaviour management purposes as in Emerson's single-school sample at entry to school ( $\chi^2 = 0.5$ , d.f. = 1, NS), and the proportion was significantly higher than in Emerson's sample at depart-

ure from school ( $\chi^2 = 12.2$ , d.f. = 1,  $P \leq 0.001$ ) or in either of the day school samples (e.g. vs. 'more difficult' pupils in Kiernan sample:  $\chi^2 = 8.6$ , d.f. = 1,  $P \leq 0.01$ ). Statistical comparisons of use of physical intervention assumed that its receipt at least once a year was most comparable with other studies in which frequencies of use were not provided. On this basis, physical intervention was used with a greater proportion of the current sample than with Emerson's (at entry to school:  $\chi^2 = 6.8$ , d.f. = 1,  $P \leq 0.01$ ; at departure:  $\chi^2 = 10.9$ , d.f. = 1,  $P \leq 0.001$ ) or Kiernan's (more difficult:  $\chi^2 = 229.8$ , d.f. = 1,  $P \leq 0.001$ ; less difficult:  $\chi^2 = 412.5$ , d.f. = 1,  $P \leq 0.001$ ) samples. On the same basis, seclusion was used with a proportion of pupils significantly greater than in either Kiernan's more difficult ( $\chi^2 = 23.7$ , d.f. = 1,  $P \leq 0.001$ ) or less difficult ( $\chi^2 = 73.0$ , d.f. = 1,  $P \leq 0.001$ ) groups, but

**Table 7** Responses to challenging behaviour across selected studies

Sample	Medication	Physical intervention	Seclusion	Sedation/PRN medication
Pupils in 52-week residential school placements ( <i>n</i> = 156) (current study)	28% taking for 'behaviour management'	37% at least weekly, 69% at least once a year	19% at least weekly, 30% at least once a year	11% at least weekly, 22% at least once a year
Previous pupils at one 52-week residential school placement ( <i>n</i> = 55) – at entry to school (Emerson <i>et al.</i> 1996)	24% taking 'anti-psychotic' medication	49% (frequency not known)	35% (frequency not known)	11% (frequency not known)
Previous pupils at one 52-week residential school placement ( <i>n</i> = 55) – at departure from school (Emerson <i>et al.</i> 1996)	5% taking 'anti-psychotic' medication	44% (frequency not known)	33% (frequency not known)	0
'More difficult' pupils attending SLD day schools ( <i>n</i> = 367) (Kiernan & Kiernan 1994)*	17% 'drugs to control behaviour'	6% 'prevention of aggression by holding, self-defence'	12% 'time-out rooms used'	Not known
'Less difficult' pupils attending SLD day schools ( <i>n</i> = 662) (Kiernan & Kiernan 1994)*	5% 'drugs to control behaviour'	3% 'prevention of aggression by holding, self-defence'	6% 'time-out rooms used'	Not known

\*Calculated from table 9 in Kiernan & Kiernan (1994).  
SLD, severe learning difficulties.

**Table 8** Frequency of access to a range of health and social care providers (modal frequencies in bold)

Service provider	Never (0) %	Very occasionally (1) %	Quarterly (2) %	Monthly (3) %	Weekly (4) %	Daily (5) %	Mean
Doctor	1	<b>51</b>	28	17	3	0	1.7
Dentist	1	<b>56</b>	42	2	0	0	1.4
Optician	23	<b>62</b>	13	1	0	0	0.9
Psychologist	22	<b>33</b>	20	21	5	0	1.5
Orthopaedics	<b>72</b>	17	11	0	0	0	0.4
Dietician	<b>59</b>	36	4	1	0	0	0.5
Physiotherapist	<b>61</b>	24	4	1	8	1	0.7
Speech therapist	13	<b>30</b>	18	9	29	1	2.1
Music therapist	<b>53</b>	12	3	3	29	0	1.4
Aromatherapist	<b>80</b>	6	1	1	12	0	0.6
Social worker	2	32	<b>58</b>	8	0	0	1.7
Occupational therapist	<b>64</b>	12	22	1	1	0	0.6

there was no difference with Emerson's sample at either point in time (point of entry:  $\chi^2 = 0.3$ , d.f. = 1, NS; point of departure:  $\chi^2 = 0.1$ , d.f. = 1, NS). On the same basis, sedation/PRN medication was used with a greater proportion of pupils than in Emerson's sample at departure from ( $\chi^2 = 14.2$ , d.f. = 1,  $P \leq 0.001$ ) but not at entry to ( $\chi^2 = 3.0$ , d.f. = 1, NS) school.

#### Access to health and social care services and participation in community and leisure activities

Table 8 shows reported frequency of access to a range of health and social care providers. Frequency of access to the doctor and the dentist can be compared with that reported by Baker (2000), who found a comparable mean rate of access to the doctor (1.6 vs.

**Table 9** Frequency of participation in a range of community and leisure activities (modal frequencies in bold)

Activity	Never (0) %	Very occasionally (1) %	Quarterly (2) %	Monthly (3) %	Weekly (4) %	Daily (5) %	Mean (mean from Baker 2000)
Swimming	6	3	14	21	<b>56</b>	0	3.0 (1.9)
Horse riding	<b>43</b>	26	15	4	12	0	1.2
Trampoline	<b>46</b>	17	1	3	29	3	1.6
Eating out	16	15	12	<b>35</b>	23	0	2.3
Cinema	<b>47</b>	26	16	10	1	0	0.9 (0.6)
Sailing	<b>90</b>	9	1	0	0	0	0.1 (0.1)
Holiday	39	<b>50</b>	11	1	0	0	0.7 (1.1)
Circus	<b>62</b>	36	2	0	0	0	0.4
Visits to places	6	18	15	18	<b>26</b>	17	2.9
Disco	15	20	18	<b>24</b>	22	0	2.2 (1.1)
Cooking	2	6	4	13	<b>60</b>	15	3.7
Craft	3	3	4	4	<b>62</b>	25	3.9 (3.2)
Music (listen)	1	2	0	0	23	<b>75</b>	4.7 (4.3)
Music (play)	8	11	1	5	<b>61</b>	14	3.4 (1.0)
TV	10	4	1	1	14	<b>70</b>	4.1 (4.2)
Videos	7	8	3	3	21	<b>59</b>	4.0 (2.8)
Games	11	8	1	3	28	<b>50</b>	3.8 (2.2)
External clubs	<b>67</b>	4	4	4	20	1	1.1

**Table 10** Frequency of use of various forms of public transport (modal frequencies in bold)

Type of transport	Never (0) %	Very occasionally (1) %	Quarterly (2) %	Monthly (3) %	Weekly (4) %	Daily (5) %	Mean (mean from Baker 2000)
Bus	<b>55</b>	27	8	4	4	2	0.8 (1.6)
Train	<b>57</b>	28	3	10	1	0	0.7 (0.1)
Taxi	<b>46</b>	36	12	6	0	0	0.8 (1.0)
Boat	<b>78</b>	17	0	5	1	0	0.3 (1.0)
Aeroplane	<b>96</b>	4	1	0	0	0	0.1 (0.9)

1.7) in a sample of adults with learning disabilities and a lower rate of access to the dentist (0.9 vs. 1.4).

Table 9 shows the reported frequency of pupils' participation in community and leisure activities, and Table 10 shows their use of various forms of public transport. Tables 9 and 10 include, where available, comparisons with the same items as used by Baker (2000).

#### Educational and other arrangements

A total of 99% of pupils had a designated key worker, 33% of whom were male and 67% female.

Pupils had had the same key worker for, on average, 13 months (range: 1 month–6 years). Sixteen per cent of pupils had a befriender or advocate other than their key worker. Pupils were in classes of an average of 4.8, with an average of 5.2 adults per class. Three per cent of pupils did not take part in group class activities. A total of 99% of pupils received individual tuition/intensive support additionally or instead of class activities. The adult : child class ratio of 5.2:4.8, i.e. 1.1:1, may be compared with the 1:5 and 1:9.6 ratios reported in day SLD schools by Male (1996) and Preddy & Mittler (1981), respectively.

## Discussion

The limitations of the data reported here should be considered. First, the postal survey method relies on a representative return being obtained. The number of schools providing 52-week care for children and young people with severe learning disabilities and challenging behaviour is small, so that non-participation by some schools inevitably risks the representativeness of the sample obtained although, as noted above, there appeared to be few differences between participating and non-participating schools. Second, the accuracy of the data relies upon the knowledge of the respondents. It would have been useful to gather some information on the respondents and the length of time they had known participants. In some cases (see below), comparisons with parental reports on a sample from the same population suggest that some respondents may have been insufficiently knowledgeable. Third, inevitably the data are limited by the need to encourage responding by presenting the task in a way that can be carried out quickly and easily. This means that the data are entirely quantitative, and it is easy to identify other aspects of the characteristics and experiences of the participants that could have been explored. Given the significance of challenging behaviour to their placement and given the generally recognized relationship between communication and challenging behaviour, further information about participants' challenging behaviour and its management/treatment, and communication skills and their facilitation, would have been particularly pertinent. Fourth, comparisons with other studies are inevitably hampered by differences of method and sampling so that the differences identified between different populations should be interpreted cautiously.

Despite the above limitations, the study provides considerable information of interest regarding the characteristics of children and young people with severe learning disabilities attending 52-week residential schools. About three-quarters are boys, and they are largely teenagers and in long-term placements. While their ethnic and religious background are not dramatically different from the population at large, there is some suggestion of higher proportions of pupils from minority ethnic and religious backgrounds although, in some cases (e.g. the over-representation of those of a Jewish religion), this

may reflect the background of some of the organizations running the schools. Less than one-quarter of the sample has easily understood speech, and almost half have no understandable speech at all. For many, various methods of non-vocal communication are therefore highly significant. Three-quarters are reported to have autistic spectrum disorders, the great majority are independently mobile, and small proportions were reported to have visual or hearing impairments. All were reported to display high numbers of challenging behaviours, many of which caused a serious problem. The reactive management of their challenging behaviour included, for many, regular use of physical intervention, seclusion, protective devices and/or medication.

It is useful to compare these characteristics, where possible, with the sample from McGill *et al.* (2006) as it came from the same population and with reports provided by parents rather than school staff. In most respects where comparison was possible (gender, age, ethnic background, percentage displaying serious aggression, number of challenging behaviours), there were no significant differences between the samples, strengthening the evidence for the robustness of those aspects of the current data. Significant differences were found, however, in other respects, with McGill's *et al.* sample reporting lower prevalence of autistic spectrum disorder and higher prevalence of both visual and hearing impairments. It seems possible that parental reports of visual and hearing impairments are more to be relied on, and that the greater reports of autistic spectrum disorder by school staff reflect its increasing use as a diagnosis and the background of certain of the schools being specifically provided for children with 'autistic spectrum disorder'.

Comparison with other samples is also instructive. Generally, there is unsurprising evidence from these comparisons of significant differences between the 52-week residential school and the SLD day school population. The former appear more likely to be male, to display serious aggression, to display high numbers of challenging behaviours and to be taking medication for behaviour management purposes. They are also less likely to have visual or hearing impairments, although the comparison with parental reports would suggest otherwise, so that this finding should be treated with considerable caution. Many of these differences between residential and day popu-

lations are considerably reduced or become insignificant when those described by Kiernan & Kiernan (1994) as the 'more difficult' group in SLD day schools are considered. This group has a higher proportion of male (although still significantly less than in the current sample), is actually more likely than the current sample to be reported as displaying aggressive behaviour, and takes more medication for behaviour management (although still significantly less than the current sample). In other words, there is some evidence that this 'more difficult' group in SLD day schools overlaps with the population of 52-week residential schools in a number of significant ways. Such a finding clearly raises a number of interesting issues, which are discussed below.

Only two significant differences were apparent in the comparison between the current study and that of a single 52-week residential school (Emerson *et al.* 1996). The current sample had significantly higher proportions of reported autistic spectrum disorder and significantly lower rates of serious aggression. Given that Emerson *et al.* (1996) were looking retrospectively at children who had gone through Beech Tree, it seems likely that the difference in the reported prevalence of autistic spectrum disorder reflects the passing of time and the increasing application and acceptance of such a diagnosis. The rates of serious aggression are not directly comparable in that the Beech Tree rate is at 'point of entry' to the school while for the current sample it is, on average, 3 years after being admitted. Children admitted to Beech Tree may have been more likely to display seriously aggressive behaviour, but it is also possible that the reduced proportion in the current sample reflects the beneficial effects of 3 years of specialist residential school attendance.

The data also provide interesting, albeit preliminary, information about the experiences of children and young people at 52-week residential schools. There appears to be a relatively extensive involvement with a range of allied health professionals, especially speech and language therapists and psychologists. These data are noteworthy in perhaps two rather contradictory ways. First, local educational and other services often struggle to get any involvement from such professionals, especially beyond junior school age. Therefore, the residential schools in this sample appear to be adding value to their educational provision by greater such involvement, probably mainly

through their direct employment. Second, despite this evidence of added value, the fact that psychologists are involved no more than 'very occasionally' with over half the sample, and speech and language therapists similarly with over 40%, suggests that many of the children and young people attending these schools have far less than optimal involvement from professionals likely to be particularly significant in advising on the management and remediation of challenging behaviour. The extent to which this is a between-school effect and the extent to which substituted resources (e.g. through the availability of specially trained teachers) are made available are clearly areas where further enquiry would be useful.

Where comparison is possible, there appear to be generally higher rates of participation in community and leisure activities and generally lower rates of use of public transport than reported by Baker (2000). However, it should be noted that Baker's scale has not been validated at the level of individual items, so that these comparisons need to be treated cautiously.

Finally, data on educational arrangements suggest very high staff : pupil ratios, a factor that undoubtedly contributes both to the capacity of the schools in accepting pupils found to be very difficult to support in local services and to the high cost of such residential school placements. Clearly, an exploration of the value added by such high staff : pupil ratios would be of considerable interest.

Fifty-two-week residential schools serve, perhaps, three main functions. First, they provide an intensity of educational support not typically available in local SLD schools, the absence of which may have led to the children's exclusion or the school's acceptance that their needs are better met elsewhere. Second, they provide year-round respite for the families of children and young people who, in a context of inadequate or non-existent local support, may have found their situation unsustainable. Third, and more controversially, by providing a 24-hour service or 'curriculum', they ensure a consistency of provision that facilitates the development and management of their pupils. They provide these functions at considerable financial and social costs, and it is appropriate to ask whether they are the best available alternative. Would it be possible to provide for these children in their local communities? Addressing such a question requires a good knowledge of the characteristics of

the children involved. It is clear that, in general, they present a range and complexity of need that most local services currently struggle to meet. At the same time, the evidence that there is some overlap in their characteristics with the 'more difficult' children in day SLD schools suggests that local educational support may be possible for at least some of the group. This is also consistent with the view expressed by many Local Education Authorities that residential school placements occur more for social than educational reasons. Given the widespread poor quality of family support, we simply do not know whether good-quality support would allow families to maintain their child at home. The overlap in characteristics with the day SLD population also carries an additional implication. It seems very likely that children at day SLD schools currently in this 'more difficult' group will be candidates over the next few years for places at residential schools. Therefore, they may be seen as an 'at risk' group for whom focused behaviour support at school and at home may help to prevent the need for residential schools.

But why would we want to prevent residential school placement? To suggest its prevention is not, of course, to say anything about the quality of its provision. As noted above, the only study to have looked at outcomes has suggested that these are generally positive (Emerson *et al.* 1996). But the costs associated with its provision should also be considered. We will mention two main (non-financial) costs here. First, the distance between residential school and family has a considerable impact on the maintenance of family contact (McGill *et al.* 2006). The children in the current study will have lived away from home on average from the age of 12 years (and possibly from a younger age if, as is almost certainly the case, some of them had previous placements at other residential schools). Second, this reduction in family contact which is, of course, a cost in itself, also increases the vulnerability of children to abuse and neglect. Children attending 52-week residential schools share an amalgamation of factors that have been shown to increase the risk of abuse. Their personal characteristics (e.g. challenging behaviour, poor communication, social impairment, etc.), their social situation (e.g. limited family contact, lack of advocacy or befriending support) and their service situation (relatively isolated, 'total' institution, use of physical

intervention) all have been associated with abuse (Rusch *et al.* 1986; White *et al.* 2003). These vulnerabilities do not seem to be properly recognized with intermittent contact from local authority social work and education staff and a lack of clarity about the 'looked after' status of children.

This study provides additional information about a group of children and young people with very complex needs. Clearly, considerably more research is needed into the processes by which children arrive at residential schools, their experiences there and the outcomes for all parties. The research agenda should also include the experimental development of local alternatives.

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