Barriers to tests and exams for autistic pupils: Improving access and longer-term outcomes

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Abstract

Despite the availability of access arrangements for tests and exams for pupils with special educational needs and disabilities, many autistic children and young people have low academic achievements. There is also a lack of consensus on what their educational priorities should be and a failure to link their school programmes to longer-term outcomes. More broadly in the UK, the value of tests in primary school is contested. In this qualitative study based in 5 mainstream primary schools in England, school staff (n = 36), autistic children (n = 10), their parents (n = 10), autistic adults (n = 10), and a sample of parents of children in the same class as the participating autistic children (n = 63) provided their views on school tests and educational priorities for primary school pupils. Findings reveal mixed opinions on what autistic pupils should study in school, and suggest that they are not receiving the access arrangements to which they are potentially entitled. Additional factors, including stress in school and the language of test questions, create further barriers to education and success in tests. Addressing these issues and consulting with autistic pupils on their educational priorities could help improve their future well-being and attainment.

Key words

autism *school tests* *access arrangements* *educational priorities* *outcomes*

Introduction

The educational achievements and academic outcomes of autistic children and young people are typified by low attainment and inconsistent participation in standardised assessment schemes (Ambitious About Autism 2013, 2016; Fleury et al. 2015; Keen, Webster and Ridley 2016; Department for Education [DfE] 2018, 2019a, 2019b). This is despite national, European and international provisions that stipulate parity of access, equality of opportunity and necessary accommodations for disabled children in order to achieve inclusion and lay a path for potentially positive futures (United Nations Convention on the Rights of Persons with

Disabilities 2006; Douglas et al. 2012; Children and Families Act 2014). Indeed, if the 'single most likely destination for many disabled people appears to be poverty' (Dockrell, Peacey and Lunt 2002, 46), then autistic children are seemingly bound for limited employment opportunities (Howlin et al. 2004; Levy and Perry 2011) and highly impoverished health and well-being outcomes in the longer term (Cassidy et al. 2014; Hirvikoski et al. 2016).

A facile explanation for this unsatisfactory state of affairs might centre on an assumption of autistic dysfunction and an adherence to the view that 'within-child' characteristics inevitably lead to academic and general 'failure at life'. Indeed, the supposition that autistic people are cognitively impaired 'pervades the popular and scientific literature' (Dawson et al. 2007, 657), while the abilities of autistic children who have minimal speech can be underestimated if conventional assessment instruments are used (Courchesne et al. 2015). Discussions are further complicated by debates, presumptions or even an unwillingness to address the issue of educational priorities for autistic children and young people (Milton 2016; Petrina, Carter and Stephenson 2017). In simple terms, questions revolve around whether it is better to tackle the posited impairments associated with autism – communication difficulties, problems with social interaction etc. – in school (Moores-Abdool 2010; Petrina et al. 2017), or if the focus instead should be predominantly on academic skills, as it is for other pupils (Moores-Abdool 2010; Wittemeyer et al. 2011; Keen et al. 2016). Continued debates about educational placement (Hesmondhalgh 2006; Wing 2007), as well as suitable assessment programmes for children with severe learning disabilities, for example (Standards and Testing Agency [STA] 2016), additionally complicate these issues. In England and elsewhere, this matter is further obfuscated by fierce arguments about the value of national tests and exams for all pupils (Segool et al. 2013; Hutchings 2015; Ward and Quennerstedt 2019), particularly in the primary phase of education, from which the findings in this paper are drawn. For example, it is argued that when schools become little more than 'exam factories', children can experience mental health issues (McDonald 2001) and teachers endure high levels of stress and demoralisation (Perryman et al. 2011). Furthermore, there is a view that when tests are imposed at government level and are linked with school performance measures, this leads to poor educational practices such as 'teaching to the test' (Ward and Quennerstedt 2019), and that creativity is dampened and learning horizons narrowed.

Meanwhile, children with special educational needs and disabilities (SEND) are considered to represent a further complication within this whole process (Dockrell et al. 2002; Lindsay 2007), as their presumed low abilities risk pulling down the average scores of individual schools. In

addition, concerns are expressed that pupils with SEND could find participation in assessment stressful (Douglas et al. 2012), impacting negatively on their motivation and self-esteem (Florian et al. 2004).

It is within this fractured and contested scenario that these findings are presented and discussed, drawn from in-depth data gathered on the educational inclusion of 10 autistic children in 5 mainstream primary schools in England. Although the focus of the study was predominantly on the children (Wood 2019a; 2019b; 2020), our attention here is mainly on the adult participants, who expressed their views on school tests, educational priorities and outcomes.

Terminology

In this paper, the term 'assessment' indicates the general process of testing which typically takes place for all children in schools. 'Teacher assessment' is used here to refer to tests or exams which are both devised and delivered by a teacher. 'Tests' refer to both in-class assessment activities (e.g. spelling tests) and national assessments e.g. SATs (Statutory Assessment Tests), and the term 'exams' also indicates national assessments.

Access arrangements

For certain pupils, 'accommodations' (e.g. the provision of extra time) are needed or 'adaptations' (e.g. providing the test in a different format) to tests might be made: overall, these are 'access arrangements' (STA 2018). Their purpose is to ensure parity of access for disabled pupils in assessment (Lazarus et al. 2009; Douglas et al. 2012) and are considered to facilitate greater participation and improve the test-related self-efficacy and motivation of students with learning disabilities (Feldman, Kim and Elliott 2011). Access arrangements have also been correlated with a reduction in school exclusions of disabled pupils (Cox et al. 2006).

In England, some access arrangements have to be applied for, while others require a simple notification to the STA. However, a key principle is that access arrangements must reflect 'normal classroom practice' (STA 2018, 4) for individual children. Although there are no autism-specific access arrangements for autistic children (Wilkinson and Twist 2010), school staff may draw from existing arrangements to help them complete tests (STA 2018). Indeed, applying suitable access arrangements is considered a key component of the educational inclusion of autistic pupils (Jones et al. 2011).

However, questions have been raised about how consistently these access arrangements are applied both in the UK (Wilkinson and Twist 2010) and in the US, where all students with disabilities must be included in state and local assessment and accountability systems, with

appropriate accommodations where necessary (Cox et al. 2006; Lazarus et al. 2009; Kurth and Mastergeorge 2010; Moores-Abdool 2010). This inconsistency has contributed to the concern that access arrangements for tests might invalidate their results (Florian et al. 2004; Lazarus et al. 2009).

Methodology

The data collection for this case study (Flyvbjerg 2006; Thomas 2011) took place in 2015 across five schools within a single Local Authority in England. They consisted of a small (< 300 pupils) primary school, a large (>800 pupils) community primary school, a linked infants and junior school (which operated relatively separately and so this division was maintained in the study) and a state religious school. Adult participants consisted of 36 school staff, 10 parents of the autistic child participants (n = 10) and 10 autistic adults from across the UK: some were parents themselves, but this was not a focus of the present research. In addition, 63 parents of children in the same class as the participating autistic children completed a questionnaire.

Some of the data discussed in this article are drawn from the following questionnaires which related in part to school tests:

1. Children's questionnaire; completed with the support of a TA and/or the researcher by 7 of the 10 the autistic children. The 3 youngest children, aged 4, 4 and 5 years, were unable to access this format.
2. Teacher questionnaire (n = 13); one completed by teachers (n = 12) for each autistic child in their class.
3. SENCO (Special Educational Needs Coordinator) questionnaire (n = 11); one completed by SENCOs (n = 5) for each autistic child in their school. However, the SENCO questionnaires from the large primary school had to be set aside because the SENCO was unsure of the answers e.g. about the type of support the autistic children received for tests.
4. Parent questionnaire (n = 63); completed by parents with a child in the same class (total n = 292) as the autistic child participants. These were completed anonymously and were returned via the school office of each school. The children of 50 parents had no diagnosed SEND, 13 had a diagnosed SEND, 9 of whom were participants i.e. they were parents of the autistic children in this study. Not all parts of the questionnaires

were completed correctly. All correctly completed answers are included in this analysis; therefore the numbers of responses are not the same for each question.

The purpose of the questionnaires was to provide indirect, subjective evidence and enabled simple, descriptive statistics to be gathered as well as qualitative data from open questions. Due to small group sizes, some data are presented in summarised form. These data informed the choice and management of codes (Strauss and Corbin 1998; Saldaña 2016) on NVivo through which the remaining data were analysed (Richards 2005). The non-questionnaire data derive from the semi-structured interviews with the autistic adults (n = 10), teachers (n = 12), teaching assistants (n = 15), SENCOs (n = 5), deputy Headteachers (n = 5), autistic children (n = 8) and semi-structured interviews or focus groups with parents of autistic children (n = 10), all of which centred in part on school tests, educational priorities and longer-term outcomes. The two youngest children, both aged 4, were not able to provide any data relating directly to these areas, although data were collected from them concerning curriculum access and have been reported elsewhere (Wood 2019a; 2019b; 2020).

Findings

1. Attitudes towards tests and educational priorities

Parents were asked to rank, in order of importance, using numbers 1 – 5 (with 5 being high) from the following options, what their child should 'get out of going to school':

Making friends

Gaining independence

Studying a range of subjects

Improving knowledge and understanding

Doing well in tests

Their responses are set out in Figures 1a) and 1b):

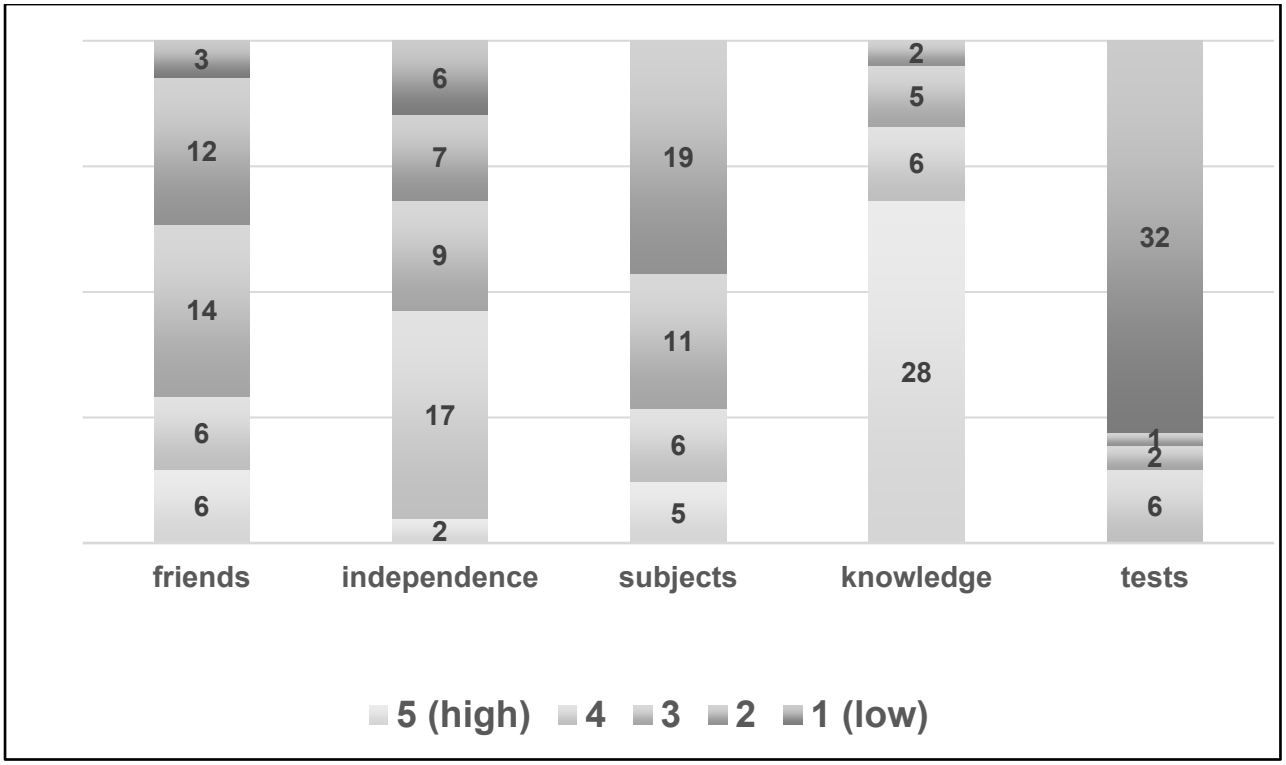

Figure la: Educational priorities of parents of children without SEND (n = 41): numbers of parents endorsing each rating

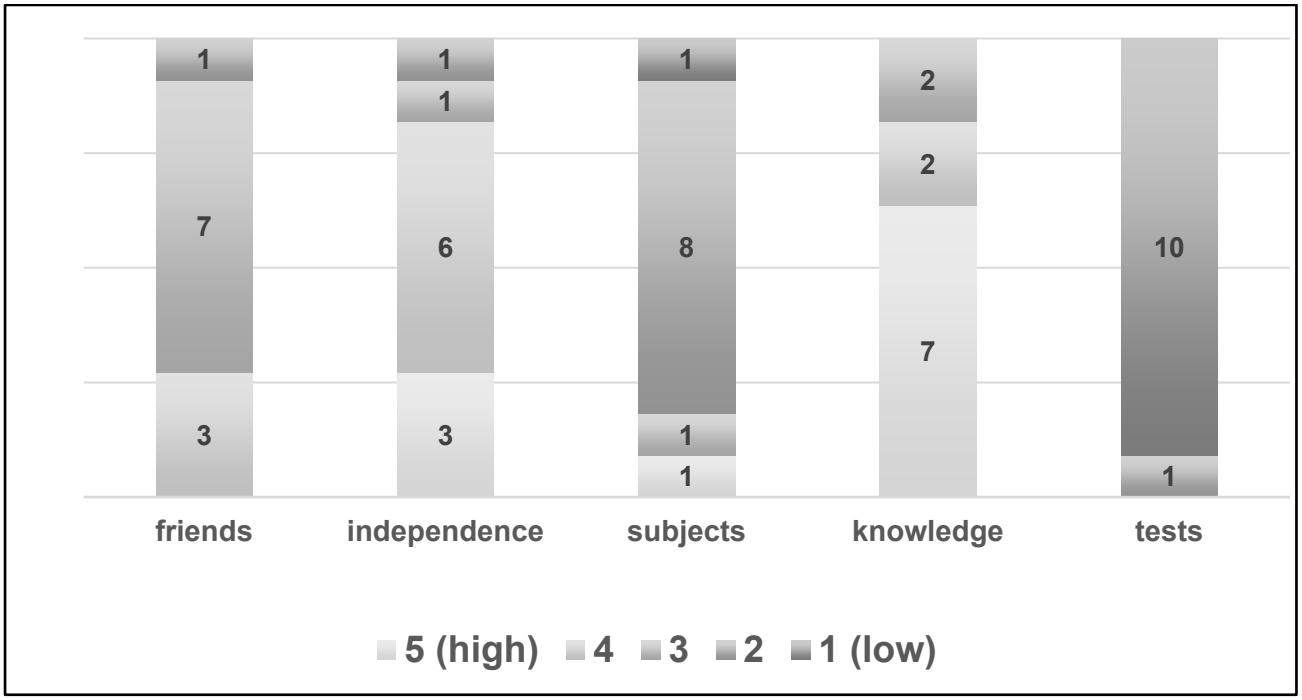

Figure 1b: Educational priorities of parents of children with SEND (n = 11): numbers of parents endorsing each rating

Doing well in tests, when ranked alongside four other educational priorities, was the least important priority for both groups of parents and no parent ranked doing well in tests as the

most important priority in primary school. Improving knowledge and understanding was the most important priority for both groups of parents. The non-SEND group valued more studying a range of subjects than the SEND group, and gaining independence was a slightly higher priority for the SEND group. Making friends was quite an important priority for both groups, but only some of the non-SEND group ranked this as the most important priority.

The parents were then asked, via a question which required a non-ranked, multiple option response, to give their opinion of school tests.

Table 1: Results of parents' structured question on school tests: N and % endorsing each answer

What is your opinion of tests in schools?	Parents: children without SEND (n = 46)		Parents: children with SEND (n = 12)	
	n	%	n	%
There are too many of them	12	26	3	25
They are an important way of tracking my child's progress	26	57	9	75
They don't test what really matters	7	15	1	8
There should be more regular testing	7	15	2	17
They get in the way of learning	13	28	1	8
They are a good discipline for my child	21	47	2	17
They are not relevant to my child	3	7	3	25
My child finds them stressful	11	24	6	50
My child seems quite relaxed about taking them	22	48	2	17

When asked about the intrinsic value of school tests, rather than comparing with other educational priorities, parents in both groups – but particularly the non-SEND group - were broadly more positive about them, despite the fact that more negative (n = 5) than positive options (n = 4) were available. The non-SEND group was more inclined to think that taking tests is a good discipline for their child, and that their child is also quite relaxed about taking them, while half of the SEND group considered that taking tests was stressful for their child. However, the SEND group was more inclined to consider that tests are an important way of tracking progress.

The final question was open and unstructured, and parents were invited to write any comments they might have about school tests. Of the total responses, 32 were from the non-SEND group and 9 from the SEND group (total n = 41). Ten parents from the non-SEND group and 2 from the SEND group asserted that testing is important e.g. *"I feel tests are a good way of parents getting to know progress on a child's development"*, while 8 from the non-SEND group and 3 from the SEND group considered that tests can impede learning e.g. *"Tests get in the way of more creative learning and disrupt children's progress. Most are meaningless"*. Nine parents from the non-SEND group and 1 from the SEND group felt that tests could be both positive and negative, and 5 parents from the non-SEND group and 1 from the SEND group expressed some sense of suspicion about the process e.g. *"Testing in schools seems very political and more important for the school than for the child"*. Five parents from the non-SEND group and 1 parent from the SEND group asserted that their child was positive about tests e.g. "*Some tests (Reading) he actually quite enjoys"*, while only 3 parents from the non-SEND group, but 4 parents from the SEND group stated that their child had a negative attitude towards tests e.g. *"My child really struggles and finds tests very stressful*". Only parents of children with SEND (n = 5) suggested that tests should be adapted so that more children can access them e.g. *"Children with SEN should approach testing in a different way".* Overall, despite a mixture of positive and negative attitudes towards tests from both groups of parents demonstrated in this open question, there was little sense that tests could support the process of teaching and learning itself, either for children with or without SEND.

Seven of the 10 autistic children who participated in the study completed a questionnaire which included two, trichotomous questions about tests, requiring them to tick the answer reflecting their view:

Question 1: I like doing tests

Yes n = 3 No n = 3 Sometimes n = 1

Question 2: I think tests are important

Yes n = 5 No n = 2 Sometimes n = 0

The answers from this very small sample are fairly diverse, although most considered tests to be important. These autistic children were also asked, via an open question, what would make tests more accessible for them and, while this question was hard for them to answer, they did not indicate any particular sense of stress associated with tests; e.g. "*I find them already quite easy for me*".

During the semi-structured interviews and focus groups with parents of autistic children (n = 10) and the semi-structured interviews with the autistic adults (n = 10), participants were asked about what the educational priorities should be for autistic children in primary school. Both groups emphasised happiness and well-being, as well as less tangible skills, such as developing a love of learning. However, the parents emphasised socialisation more than any priority, with two parents highlighting this as the only educational priority that mattered to them. Indeed, this point was repeated throughout interviews and discussions. One parent feared that at secondary school, her son would be "*left (...), sitting on his own*", while another parent had rejected the local special school because the children there "*weren't very sociable, they weren't playing with each other. (...) they weren't interacting with each other*".

Meanwhile, the autistic adults emphasised academic skills more than any other priority, but some also highlighted, in other parts of the interviews, the significant social difficulties they had experienced in school:

> *At school, I would be on the edge of the playground, watching the other kids. I wanted to join in, but didn't know how to. I would be jumping up and down and flapping my hands, but I didn't know what to do. If someone approached me, I would freak out.* (Autistic adult)

Nevertheless, not all autistic adults expressed concerns about socialisation in school: one stated, for example, that the other children at primary school were "*irrelevant*" to her. Moreover, the longer-term ambitions expressed in interviews by the autistic children – being a chef, a mechanic, a martial arts expert, working with computers – were driven by their interests, rather than social preoccupations.

2. Access to same tests as peers

According to the teacher questionnaires, 10 of the 13 autistic children in their classes were taking part in the same tests and assessments as their peers. However, during the semi-structured interviews with all school staff (n = 36), 3 deputy Headteachers, 2 SENCOs, 4 teachers and 4 teaching assistants all referred to some autistic children, including a boy who was in Year 6 (when SATs are usually taken), as being disapplied from classroom-based or national tests. In addition, 1 deputy Headteacher, 3 SENCOs and 5 teachers stated that they used different assessment schemes specifically for the autistic children. This suggests that some of the autistic children were being excluded from school tests more often than the information in the teacher questionnaires had implied.

School staff, parents and autistic adults (total n = 56) also provided, in interviews and focus groups, a number of reasons why they considered autistic children found tests difficult to access. These are summarised in Table 2:

Table 2: Reasons why tests are difficult to access for autistic children: number of participants offering each reason

Problem	Participants		
	School Staff (n = 36)	Parents (n = 10)	Autistic Adults (n = 10)
Too long	5	2	0
Wording	4	0	3
Change of routine	4	0	0
Social reasons	0	1	6
Tests written from a 'neurotypical' standpoint	2	0	1
Child getting 'stuck' and unable to move on	2	1	0
Child can't sit still/focus	3	1	0
Inferences/abstract concepts difficult	2	0	1
Child not internally motivated	3	2	1
Child's preoccupations get in the way	1	2	0
Difficulties with writing	3	0	1
Child susceptible to stress	2	2	3
Sensory issues	0	0	2

School staff were more likely to focus on practical aspects, such as that the child can't sit still, and were inclined to link difficulties in accessing tests with the impairments associated with autism, such as an inability to cope with change or a lack of concentration. Autistic adults and, to a lesser extent, parents, focused on the social, emotional and sensory difficulties associated with testing, especially if the child is already experiencing stress simply by dint of being in school:

> *It's like a thermometer. Most people are at zero, and a test situation pushes you up to 20. Someone who has Asperger's might already be at 15, and a testing situation might push them off the scale*. (Autistic adult)

Some of the autistic adults described the high levels of anxiety they had experienced at school when they performed poorly in tests, mainly due to the humiliation experienced when marks were read out loud, or by having attention drawn to them in class. One autistic adult said that she found it difficult to navigate the social aspects of testing, while another commented that for autistic people, not getting full marks "*can feel like a complete failure*" and that complaining about any mark less than 100% could seem like "*an inverted form of gloating*".

Parents and staff commented that the current format of school tests don't allow the abilities of autistic children to be manifested, with issues such as alternative interpretation of questions and reading materials creating hurdles which were felt to be unfair to autistic children. The issue, a SENCO asserted, was not that autistic children don't understand the subject, but that tests are written from a non-autistic, or 'neurotypical' perspective:

> "*It's almost like you're expecting someone to step outside of their nature and do something completely alien to who they are.*"

Similarly, autistic adults and school staff highlighted that the wording of test questions can make them inaccessible to autistic children, with one deputy Headteacher commenting that "*it can seem like they are being tricked into thinking one thing rather than another*", and a TA remarked that "*the language throws them off*".

Some participants considered that autistic children are simply not intrinsically motivated to do well in tests, and the length of tests – i.e. that they were thought to be too long – was also aired as another factor in the lack of accessibility of school tests for autistic children.

3. Access arrangements used to help autistic children

In 2015, when these data were collected, the access arrangements which were potentially available to autistic children, and which have not changed significantly in the interim (STA 2018), were as follows:

- early opening of papers
- additional time
- scribes

- transcripts
- word processors or other technical/electronic aids
- administering the tests at an alternative location
- readers
- prompters
- rest breaks
- apparatus for the Mathematics test
- making modifications to test papers (e.g. photocopying onto differently coloured paper, enlarging text)

In their questionnaire, SENCOs were provided with a positively-worded question concerning support for the autistic children (n = 11) in tests which enabled non-ranked, multiple answers. According to their responses, only 4 autistic children were provided with extra time, 4 with readers, 3 with prompters and 1 with a scribe. None was provided with early opening of papers, rest breaks, a transcript, use of technology such as a word-processor or with apparatus for the Mathematics test. Modifications to test papers were not made for any of these children and none took the test in an alternative location. Indeed, according to these questionnaires, 5 of the autistic children received no particular support during tests.

These data suggest that the autistic children were receiving less help in tests than they were potentially entitled to. Moreover, given that most of the autistic children in this study received additional support in class from a dedicated teaching assistant, they were possibly receiving *less* assistance during tests than at other times. In some cases, this circumstance appeared to be based on a fear of 'over-helping' certain pupils in test situations, despite the stipulation from the STA (2018, 4), that access arrangements must reflect 'normal classroom practice.' This implies that at least some aspects of usual TA support could be fruitfully applied to support autistic pupils during tests.

Adult participants (n = 56) were asked in the semi-structured interviews or focus groups what sorts of arrangements they considered would help autistic children to access tests. The autistic adults and, to a lesser extent, the parents, tended to focus on environmental supports, such as the need for a low arousal environment, as well as a need for social and emotional support. The school staff focused more on the practical issues such as the provision of a reader, the use of a

separate room, being able to take breaks and provide answers verbally. Even though it was not clear, from the answers of staff, when they were being hypothetical and when they were referring to arrangements already in place, many of their suggestions fell approximately into the access arrangements which were already permitted by the DfE at that time, raising questions as to whether they were familiar with them.

4. Teacher assessment

In the open question on the parents' questionnaire, a total of 6 parents from both groups (SEND and non-SEND) expressed a preference for teacher assessment as opposed to standardised or externally set assessments. In addition, in interviews, 5 of the autistic adults, 2 deputy Headteachers, 3 SENCOs, 2 teaching assistants, 5 teachers and 1 parent also expressed this preference. Participants particularly emphasised the relationship between the teacher and child and as being a core component of teacher assessment. Recurrent motifs were 'familiarity' and 'flexibility', i.e. that the teacher knows the child well enough to provide the flexibility around testing which is needed to enable the child's true abilities to be shown. However, this notion was predicated on a somewhat idealised conceptualisation of a teacher (Telli, Brok and Çakiroglu 2008): a person always present, who engages with all of the children in the class, and understands them on an individual basis. Yet during data collection, staff absences (requiring the use of agency staff), shared teaching and, in particular, the fact that the autistic children were predominantly taught by the TAs suggest that it would be difficult to deliver on this ideal.

5. Alternative assessment

Alternative assessment, also known as 'alternate' assessment in the US (Browder et al. 2004), can be defined as different assessments with different assessment criteria to those undertaken by pupils without SEND (Douglas et al. 2016). The extent to which they align with, replace, or are additional to the usual assessment processes in a school, as well as how they contribute to better outcomes, is a complex and contested issue, within which there is little consensus nationally and internationally (Douglas et al. 2012). In this study, one deputy Headteacher, 3 SENCOs and 5 teachers stated that they used different assessment schemes for the autistic children. While some of these comprised alternative methods to measure progress in alignment with the school curriculum, others incorporated entirely different targets drawn from the children's Individual Education Plans (IEPs). These measured progress in self-help, independence and social skills, for example, which school staff considered more important than

the core subjects. This was despite the fact that IEPs were stipulated only to measure progress in areas 'additional to or different from the differentiated curriculum plan which is in place as part of provision for all children' (Department for Education and Skills 2001, 54, emphasis in original text). Moreover, IEPs were set aside in the new Code of Practice (DfE 2015), yet the SENCOs in this study continued to use them.

Discussion

These findings reveal mixed attitudes towards tests from the participants in this study, reflecting, perhaps, the contested nature of testing in the UK, particularly within the primary phase of education (Hutchings 2015; Ward and Quennerstedt 2019). For example, on the questionnaires, parents ranked school tests as relatively unimportant when compared with some other educational priorities. However, when asked to consider their intrinsic value, both groups, but especially the non-SEND group, were more likely to be positive about them, even if suspicions were aired about their true purpose. Only the SEND group reflected on how tests could be made more broadly accessible.

Meanwhile, although some autistic adults had found school tests stressful, this usually concerned the social aspects and the fact that school was already experienced as a demanding environment, rather than the actual tests themselves. Moreover, not all autistic adults problematised school tests, and the very light data from autistic children did not suggest any sense of stress associated with them. Indeed, examination periods can provide a welcome break from the usual noise in schools (Abineau and Blicharska 2019), which can be exhausting for autistic pupils, create sensory overload (Sainsbury 2009; Wood 2020) and lead to academic underachievement (Ashburner, Ziviani and Rodger 2008). Therefore, while assumptions should not be made about whether school tests are intrinsically stressful for autistic children, general strain resulting from social and sensory difficulties may significantly hamper their ability to prepare well for them.

In addition, even though teachers asserted via the questionnaires that most of the autistic children accessed the same tests as their peers, this was contradicted in interviews. There also appeared to be confusion over the role and continuing usefulness of the IEP, and whether 'alternative assessment' should be linked to the core curriculum, reflecting broader uncertainties on this issue (Douglas et al. 2012). Moreover, despite the strong preference expressed for teacher assessment by a number of participants, teacher absence, team teaching and a tendency to assign responsibility for the autistic child to a TA (Dockrell et al. 2012;

Sharples, Webster and Blatchford 2015) suggest that this inclination was based on an idealised notion of pupil-teacher dynamics and classroom realities. Indeed, while research by Rimfeld et al. (2019) – which excluded children with neurodevelopmental disorders – found that teacher assessment can predict longer-term outcomes as effectively as national exams, other studies show that teacher bias can lead to an underestimation of the abilities of pupils with SEND (Campbell 2015).

Triangulation of data in this study suggests that, potentially due to a lack of knowledge of their entitlements (Lazarus et al. 2009), the autistic children were not being provided with the access arrangements for tests for which they may have been eligible. This indicates, therefore, a need for further training for school-based practitioners on access arrangements, for more research into the exclusion of disabled children from standardised assessments (Cumming and Dickson 2013; Keen et al. 2016) and the extent to which alternative assessments are relevant and contribute towards positive outcomes (Douglas et al. 2016). Research is also needed into how these issues could be remediated if assessment processes were more inclusive – i.e. universal – and designed with all children in mind. This in turn could address questions about the validity of assessments when accommodations are provided (Lazarus et al. 2009; Douglas et al. 2012, 2016). Furthermore, given that both school staff and autistic adults highlighted the wording of tests to be an issue and the fact that they are written from a 'neurotypical' standpoint, more fundamental changes in layout, wording and accepted, interpretative norms need to be considered as part of this process. This could contribute to a necessary shift in the perception and understanding of autistic expression, whereby its inherent value and aesthetic are recognised (Thibault 2014).

In addition it could be fruitful to explore the role of TAs in supporting autistic pupils with the social, emotional and sensory ramifications of testing and the general stresses of school in order to support their happiness and well-being, especially as difficulties in regulating emotions have been associated with low self-esteem, academic underachievement and school exclusion (Ashburner, Ziviani and Rodger 2010). Moreover, adherence to the principles of universal design (Woronko and Killoran 2011) would provide an impetus to tackle the sensory difficulties many autistic children experience in school (Sainsbury 2009; Ashburner et al. 2008), even if problems with a lack of space could hamper this aim (Wood 2019b).

While it is difficult to draw firm conclusions about the educational priorities of parents (of children with or without SEND) and autistic adults in this study, this research does indicate

that the issue of school tests should not be separated from questions about educational priorities and longer-term outcomes (Dockrell et al. 2002; Jones 2002). Studies centred on teacher or parental report tend to reveal a preference for social skills and emotional development as educational priorities (Dockrell et al. 2012; Petrina et al. 2017), and there is a fear that academically able autistic children cannot benefit if they lack social and broader life skills (Parsons et al. 2011). However, 58% of autistic adults in Wittemeyer et al. (2011) wished that they had achieved more qualifications in school, and wanted 'neurotypicals' to stop imposing upon them their own views of what they needed educationally, socially and in the longer-term. Indeed, the future ambitions of the autistic children in this study were not evidently predicated on social criteria.

Furthermore, teachers of pupils in satellite classes, segregated or special school settings tend to rank tackling difficulties associated with autism more highly as educational priorities than teachers in mainstream classes (Petrina et al. 2017), meaning that autistic pupils in alternative settings might have very little access to the core curriculum (Kurth and Mastergeorge 2010; 2012). It is unsurprising in these circumstances, therefore, that autistic pupils in inclusive settings score better in academic subjects than their peers in self-contained settings, even when matched on intelligence measures (Kurth and Mastergeorge 2010). Consequently, and notwithstanding the limitations necessarily offered by typical school curricula, there is an urgent need to consult more directly with parents and with autistic pupils in particular, on what matters to them in their schooling, and for future studies to give greater priority to their perspectives, regardless of their educational placement.

Conclusion

While debates continue on the public stage about the usefulness of school tests, no easy answers are provided by the present findings, warning against simple generalisations when considering the education, attainment and outcomes of autistic children and young people. Whether alternative targets - especially those linked to difficulties associated with autism – are desirable and can co-exist within the usual school timetable, has not been established in this study. However, this research contributes to a growing understanding that while some 'within-child' factors can be linked to poor educational outcomes, they are additionally complicated by multiple external factors impacting negatively on autistic children. These include a lack of access to the class teacher (Dockrell et al. 2012) and to the core curriculum (Kurth and Mastergeorge 2010), conflicting views on their educational priorities, an inconsistent application of the exam access arrangements to which autistic pupils could be entitled, and

issues around language and interpretive norms. Additional factors such as noise (Ashburner et al. 2008; Wood 2018), stress (Ashburner et al. 2010) and high levels of exclusion (Wood 2019b) perhaps elucidate why concerning numbers of autistic pupils leave school with no formal qualifications (Howlin et al. 2004; Levy and Perry 2011), and have 'dismally poor' post-secondary outcomes too (Fleury et al. 2014, 74).

Therefore, while addressing the stresses autistic pupils experience in schools, the quality of their academic preparation should also be re-evaluated to ensure they have access to meaningful programmes of study (Fleury et al. 2014; DfE 2015). Moreover, exploration of the possibilities provided by universal assessment should include issues concerning the wording of tests. There is also an urgent need to consult more broadly – especially with autistic pupils themselves – on their educational priorities, and to provide them with the access arrangements for school tests and exams to which they are potentially entitled, and through which they may demonstrate their full academic and vocational potential.

Conflict of Interests

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