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Abstract

We present the findings of an annual parent/carers satisfaction survey for an opt-out, NHS-funded special schools eye care service provided by SeeAbility at 31 London school and college sites between April 2022 and March 2023. During this period, 2,799 eye examinations were completed, and 1,800 pairs of glasses were provided by the service which provides eye care, spectacle dispensing, and support with spectacle use. For each child, a plain English report explaining their visual abilities, needs, and limitations is provided. The response rate to the survey was 19.2%. Of the respondents, 96% were satisfied with the service, and 91.6% reported a better understanding of their child's visual abilities, needs, and limitations (n=417). Thematic analysis of open-text responses to service feedback requests (using Nvivo 14) revealed positive emotional responses and favourable outcomes associated with the service, specifically the successful completion of eye examinations and visual correction with spectacles, leading to improved visual outcomes.

Keywords: Children's eye health, optician, optometry, eye test, special schools eye care service, learning disabilities, parental satisfaction.

Introduction

Half of all children attending special school in the UK have a significant problem with their vision (Black et al., 2019; Das et al., 2010; L. A. Donaldson et al., 2019; Pilling & Outhwaite, 2017; Woodhouse et al., 2014). In the absence of an in-school eye care and spectacle dispensing service, the most common causes of visual impairment in this population are uncorrected refractive error and cerebral visual impairment. These studies of the special school population show that refractive error is at least 10x more prevalent than in the wider childhood population (Hashemi et al., 2018) with 35-40% of special school students needing glasses, often to high and complex prescriptions. Despite this, only 10% of families report ever accessing community optical practice and over 40% of children have no reported history of any eye care. The remaining children are under, or have a history of being under, hospital eye services, often for routine care and follow ups. It has been reported that many of these children (55%) do not attend their appointments (Jmor et al., 2014) .

In England 79% of children with severe learning disabilities and 81% of children with profound and multiple learning disabilities attend special schools and the total population attending special schools in England in 2022-23 was 166,360 (Gov.uk, 2024)

In 2017, Public Health England stated that school entry vision screening is not suitable for children attending special schools (Public Health England, 2019) and instead recommended a clinical framework model that would offer an in-school full eye examination, glasses if needed, and a report on the child's visual abilities that could be used in the child's support plan (Royal College of Ophthalmologists, 2016). This recommended model was developed collaboratively by SeeAbility with all the English eye care professional bodies. Studies have reported positive educational and behavioural outcomes to this model of care (Black et al., 2019; E McConnell, JA Little, S Black, JF McClelland, AJ Jackson, P Anketell, L McKerr, 2019; McKerr et al., 2020)

In 2021, in response to this growing evidence base, NHS England established a Special Schools Eyecare service which adheres to this model in 83 schools, accounting for just under 10% of the UK special school population. An independent evaluation of this service was published in 2023 (NHS England, 2023). This led in July 2023 to a Department of Health and NHS England commitment to rollout a programme of sight testing for children in all special schools in England (Department for health and social care, 2023).

Since 2013, SeeAbility has been providing an eye care service in a growing number of special schools as part of this NHS England Special Schools Eyecare service. The commissioned model requires annual parent/carer satisfaction surveys.

In 2018 we reported on the largely supportive views of parents using this SeeAbility service in 8 schools served at the time (L. Donaldson et al., 2018). This current analysis offers an up-to-date picture of the parental experience of the Specials Schools Service now being delivered by SeeAbility in 31 London school sites. As NHS England and NHS Integrated Care Boards plan the wider delivery of such a service across all special schools in England, we feel that the voices of parents and children now using the service will be invaluable in informing and shaping this evolution.

Methods

SeeAbility is currently contracted to provide the NHS special schools eye care service across 31 school and college sites in north west and south London.

The service in each school is delivered by a team made up of an optometrist and a dispensing optician, the same team deliver all clinics in a school wherever possible to provide continuity of care. SeeAbility currently employ 12 optometrists and 8 dispensing opticians, the majority of whom also work in other settings (such as hospitals and optical practices). Clinics are held approximately once per school term time week for every 120 children on role at a school site. Each clinician works from 1-3 days per week for the service in term time. The team is supported by 2 administration assistants, a practice manager and part time (15 hours a week) clinical lead.

The service model is opt-out which adheres to the recommendations set out in the Framework paper. The specifics of the service model are set out in Table 1.

Figure 1. Overview of service model Special Schools Eye Care Service.

Matched eye care teams of a named optometrist and dispensing optician ensure continuity of care for the school and the children
The eyecare team undertakes accredited training which includes a shadow day in school and clinical case logbook supervision. This provides assurance for parents, schools and secondary care clinics discharging to the service.
The service is opt-out, allowing for parents to stay with their usual eye care provider, if necessary, but recognising some children will miss out on care if opt-in.
A full eye examination including a refraction, visual assessment and eye health check is carried out.
Parents are made aware of their child's appointment date and time in advance and invited to attend
An appropriate choice of suitable frames is available including specialist and adaptable frames. Fitting and dispensing are carried out by a dispensing optician.
Parents are contacted before glasses are ordered for the first time to gain consent to order
A spare pair of glasses is provided in each case
The dispensing optician at the school undertakes ongoing support with spectacles fitting, repairs and adjustments, as well as routine 6-8 week follow ups of children prescribed glasses for the first time or a significant change.
A report on the child's visual limitations, abilities and needs, in plain English, is provided to the parents, school and other professionals where relevant , occupational therapists.
The optometrists liaise with the professional team around the child to support them optimally. For example, with qualified teachers for the visually impaired (QTVIs) so adaptations to teaching resources can be put in place, positioning in class can allow for nystagmus null point or visual field limitations, speech and language therapists to enable successful use of augmented communication such as eye gaze or widgets/picture exchange communication, vision habilitation specialists
Key messages to staff on the use of vision are reinforced by the dispensing optician and annual eye care and vision training sessions are offered for all teaching staff.
The service liaises with secondary care ophthalmology to ensure children are being seen in the correct place for their clinical needs.

All parents or carers of children seen by the service between April 2022 and March 2023 were sent a link to a Microsoft forms survey via email and/or text in early March 2023 using Microsoft Forms. The survey closed at the start of April 2023.

Questions addressed demographic details, parents' views of the service and their views on spectacle provision if relevant. Questions asked participants to respond to statements using a five point Likert Scale: strongly agree, agree, neither agree or disagree, disagree or

strongly disagree. Free text comment boxes were also included at the end of the survey and participants could choose to anonymously fill in the survey from the start. The full survey is available in Appendix 1.

All responses were exported from MS Forms to be analysed using MS Excel. Data was held on SeeAbility servers and only the service administrators and senior team had access to it. Data was anonymised for the purposes of this analysis.

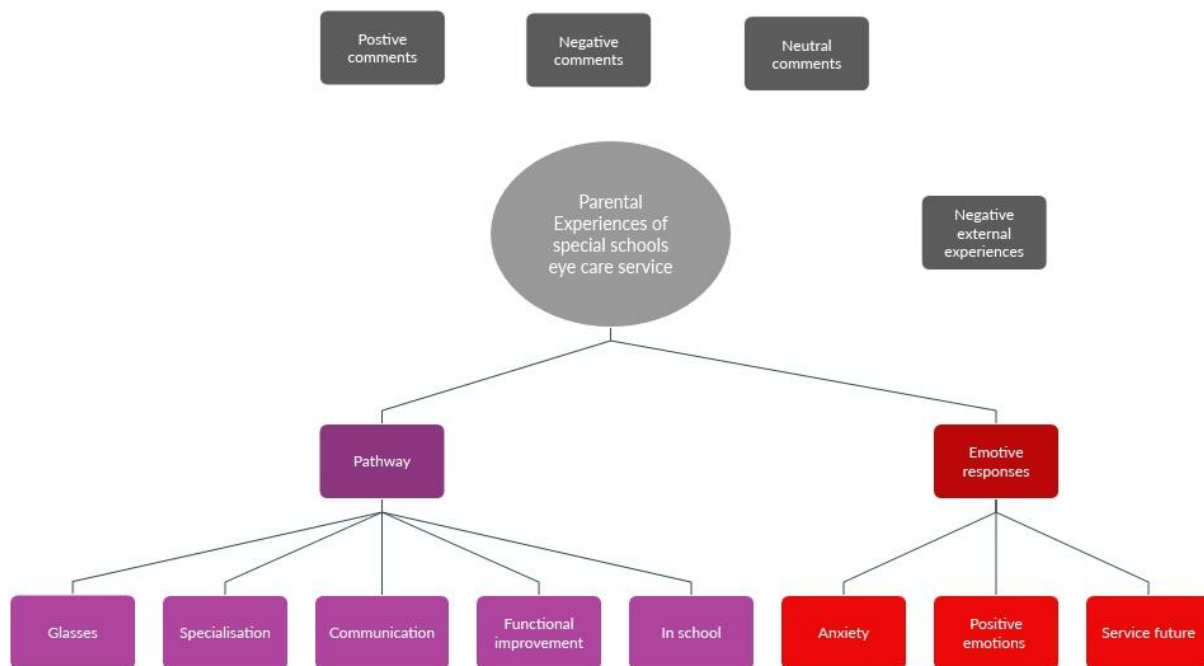
Parents were asked for open text comments under three prompting questions:

- Please share how SeeAbility helped your child get used to their glasses or ideas for how they could have helped more with this?
- Please let us know if there are any ways we can improve the service or any ways we could be doing things better.
- Please provide any other comments or feedback?

A thematic analysis was conducted on the open text responses using Nvivo 14. We worked to a definition of thematic analysis as “...a method for identifying and reporting patterns (themes) with data” (Braun & Clarke, 2006). We approached this analysis from a realist perspective in that the written comments represented the views of the participants. We developed themes from an inductive “bottom up” approach, which develops themes closely linked to the data, and our interest was to describe the views of respondents at an explicit level, that is not looking beyond the data to develop an understanding of why the participants responded in the way they did (Braun & Clarke, 2006). As researchers we acknowledge our own biases in being invested in trying to make the case for eyecare provision in the special school setting.

We followed a recognised six stage process (Braun & Clarke, 2006; Kiger & Varpio, 2020) in conducting the thematic analysis with the initial collating of the data being stage 1. The researchers MK and LD independently reviewed the responses and then came together to agree a coding framework (stage 2). The data was coded by both researchers independently and then reviewed to produce a thematic map (Figure 2) (stages 3 and 4).

Figure 2. Thematic map



We used the Standards for Reporting Qualitative Research reporting guidelines (O'Brien, Harris, Beckman, Reed, & Cook, 2014) as a checklist for authoring this report.

Results

Between April 2022 and March 2023, the service provided 2799 completed eye examinations across 31 school and college sites. 1800 pairs of glasses were dispensed (this includes routine provision of a spare pair where needed as well as replacements for broken or lost glasses).

2186 questionnaires were sent out and 425 responses were received. Of these, 11 were discounted as they were sent in error to parents whose children had not received the service in the relevant time period having left the schools in question. Therefore 417 completed responses were received from 2175 correctly issued questionnaires. This equates to a response rate of 19.2%.

407 (97.6%) responses identified which school their child attended. All schools and colleges had some completed questionnaires with the range being 1 to 44 (mean 13.45, mode 10, median 10, SD 10.13).

The questions that addressed the overall service showed extremely high levels of satisfaction set out in Figure 3.

Figure 3. Parental satisfaction with the service

Question	% agreed or strongly agreed	% strongly agreed
I am happy with the service my child and I receive from the SeeAbility Eye Care Service	96%	77.2%
I would recommend the SeeAbility eye care service to other parents.	96.9%	77%
I understand more about my child's visual abilities, needs and limitations since they have been seen by the SeeAbility service?	91.6%	65.7%
I know how to contact the SeeAbility eye care team if I need to.	83.5%	57.3%
There should be an eye care service available in every special school in England.	97.12%	83.69%

n=417

96% of parents agreed or strongly agreed they were happy with the service they and their child received from SeeAbility. Most of the remainder (2.9%) neither agreed nor disagreed with only one parent disagreeing. 98% of parents agreed or strongly agreed they would recommend the service to other parents. Of the 2% remainder of parents most were neutral with only two cases disagreeing. 91.6% agreed or strongly agreed that they had a better understanding of their child's vision with only four disagreeing with this statement. 97.8% agreed that there should be an eye care service available in every special school in England. 85.3% agreed or strongly agreed that they knew how to contact the team with a more significant 15% disagreeing with this statement.

Parents were asked for three words to describe the service. Figure 2 shows a word cloud analysis (size of word corresponds to the frequency it was used) for the parents that responded (n=349) which were all positive.

Figure 2. Word cloud detailing the words used to describe the SeeAbility eye care service in three words.

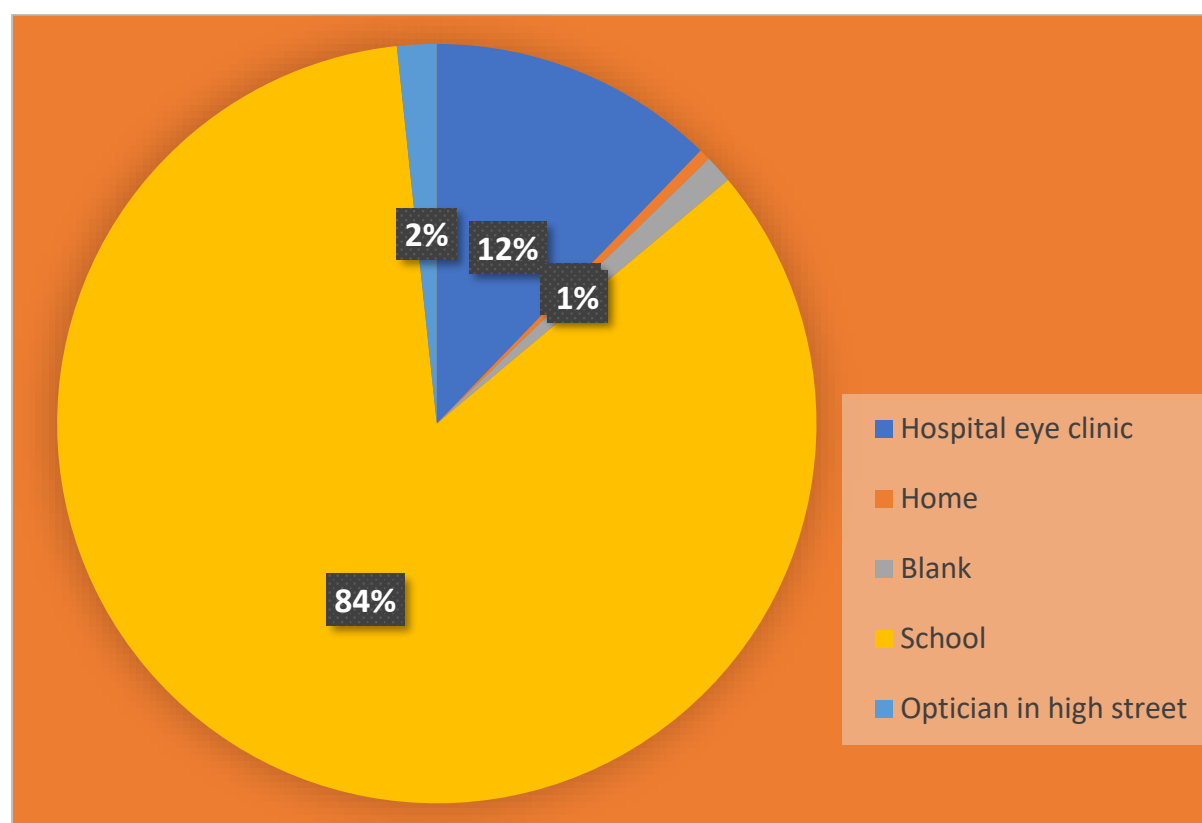


n=349

Preferred parent location to receive eyecare services is detailed in Figure 3. Parents first choice for eye care to be delivered was overwhelmingly in school (84.41%) with only seven parents (1.68%) preferring the high street opticians. Most (80.58%) stated school was their first choice location for having glasses dispensed and fitted.

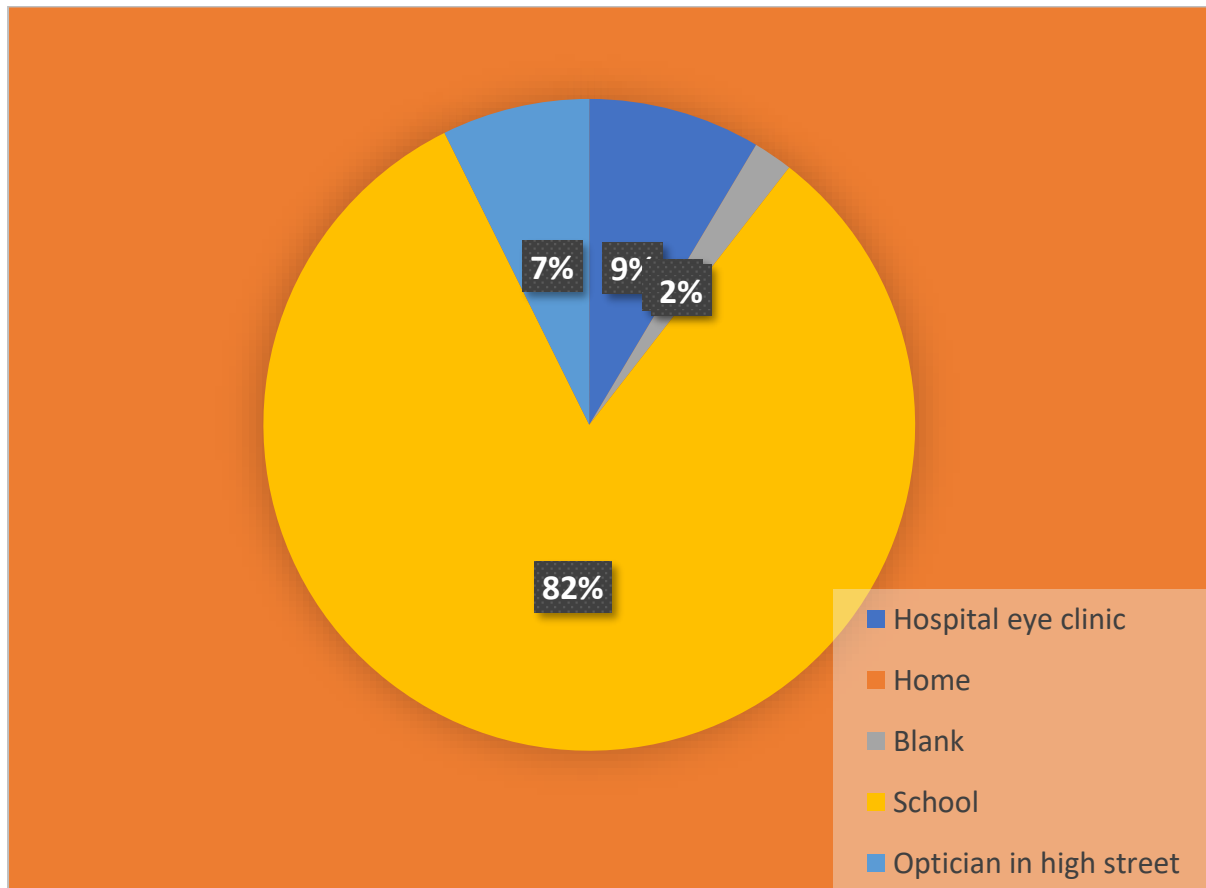
Figure 3. Preferred location for clinical assessment

Please tell us where would be your first choice for your child to receive eye care?



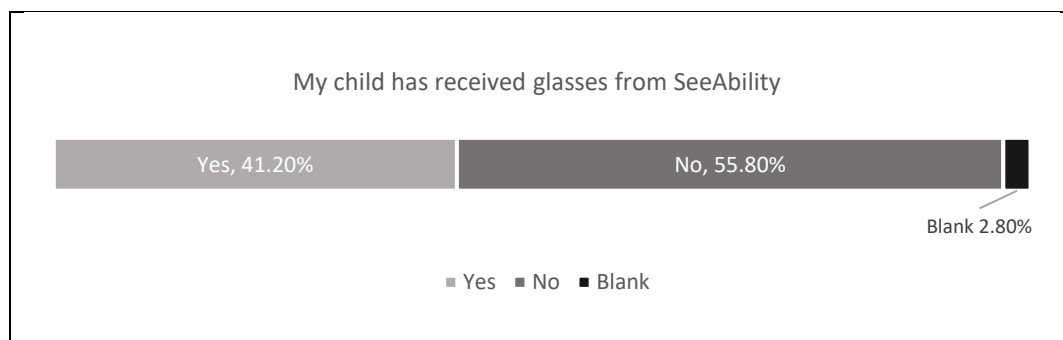
We asked the following question to explore parental preferences regarding where spectacles were supplied. 'If your child needs glasses now or in the future, where would be your first choice to have them supplied and fitted?' Figure 4 details the response.

Figure 4 – Preferred location for spectacle dispensing and supply



We asked parents if they had been supplied spectacles by the service. 172 (41.2%) reported having glasses dispensed by the service (Figure 4).

Figure 4. Proportion of children dispensed spectacles



n=417

The overwhelming majority of parent/carers (98.30%) agreed or strongly agreed that they were happy with the glasses received and 76.74% agreed or strongly agreed that the service was instrumental in helping their child use the glasses successfully (Table 3).

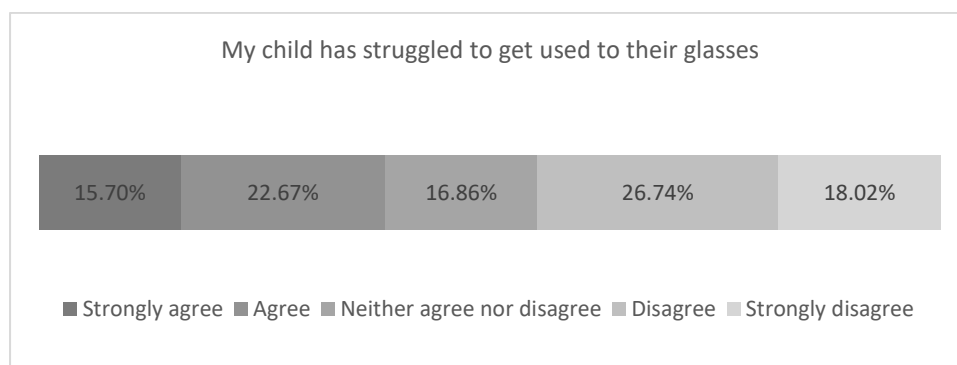
Table 3. Satisfaction with spectacles service

Question	% agreed or strongly agreed	% strongly agreed
I am happy with the glasses my child has received from SeeAbility	98.30%	83.10%
The SeeAbility service has helped my child get used to wearing their glasses successfully	76.74%	45.35%

n=172

Parents reported mixed experiences in their children's ease of adapting to spectacle use (Figure 5) with an approximately equal proportion reporting difficulties (38.37%) or no difficulties (44.76%).

Figure 5. Parental experience of their child adaption to spectacle wear



Thematic analysis

There were 510 responses under the three prompting open text questions. Comments ranged from 1 word answers to 143 word answers (Mean 19.94, Mode 1, SD 23.05).

Two broad themes of “pathway” and “emotive response” emerged from the data with a set of eight linked sub themes. These are illustrated in Figure 2, the thematic map. An additional theme of “negative experiences with other services” was also formed. Discrete statements within the written responses were coded to subthemes and a statement could be coded to more than one subtheme. All statements were coded to a sentiment of positive, neutral or negative but not all statements were coded to one of the subthemes. There were 606 individual statements coded.

The overwhelming majority of statements, 472 (78%), were positive, 99 (16%) were neutral and 35 (6%) were negative.

We have chosen to include the frequency of each sub theme (Table 4) as it occurred in the data not to draw conclusions about the relative importance of each theme but more to inform the reader as to how often themes were mentioned. The table also sets out the sentiments of the statements under each subtheme.

Table 4. Number of statements under each subtheme by sentiment.

	Subthemes	Neutral	Positive	Negative	Totals
Emotions	Anxiety	0	25	0	25
	Positive emotions	1	45	0	46
	Service future	1	44	1	46
Pathway	Dispensing and glasses	3	73	6	82
	Specialization of care	2	81	2	85
	Communication	6	42	10	58
	Functional improvement	0	18	0	18
	In school setting	0	62	2	64
	Totals	13	390	21	424
Negative experiences with external services		36			

Emotions

The overarching theme of “emotions” emerged from statements that were defined as emotive responses to the service or eyecare experiences, namely: anxiety, positive emotions and the future of the service.

Comments under this theme include:

‘..struggled to get my daughters eye tested at ... hospital as she felt anxious and scared whenever we went there’

‘I had given up taking him to the hospital due to the extreme stress and anxiety it caused him’ Without having SeeAbility, I wouldn’t know that my child is short sighted and needed glasses as it is impossible to take an autistic child to an optician to get his eyes checked..’

‘The fact that my child now sees the [service] team at school has made my life much easier and for my child it is a lot less stressful and also he doesn’t need to miss a day at school which he finds really upsetting.’

‘..We often left [hospital] before tests were completed, both upset & often me having been hurt by my son due to his heightened anxiety. Having an eye test in school removes the anxiety of a hospital visit, there is no unnecessary waiting & the test is carried out in a familiar setting, reducing any anxiety. Staff appear very well trained & tests are appropriate and adapted..’

My son was under the care of ...hospital and he gets extremely distressed at the appointment and usually they are unable to examine her eyes. Being examined by SeeAbility at his school makes the examination stress free for my son and the optician is able to complete the examination’.

Pathway

The overarching theme of “pathway” emerged from statements that were defined by their relevance to the mechanics of the service, namely: dispensing of and ongoing support with spectacles, specialization or care, communication, functional improvement and school setting.

‘an environment providing a service that allows them to stay in a comfortable setting is key to insuring that they are getting the necessary help they need, in a place they are comfortable, in is vital’

‘Without [the service] my son would not be wearing glasses as high st. optician would not be able to meet his needs. [the service] literally changed my son’s life’

“my son never had an eye test at the opticians before this as he didn’t understand what to do..they didn’t have the experience to help’

‘Before [the service] , X never wore his glasses, we have tried for years! Soon after [the service] got involved at my son's school, that all changed. It has made a big difference to my son as he will now be able to see his environment better, which in turn will help him with his learning. I am very appreciative of this service and I am very glad it exists.’

'there would be no way I would be able to take my daughter to a high street opticians'

'Prior to [the service] assessing him my son had never been able to have an eye test. High Street opticians refused to see him.'

'there would be no way I would be able to take my daughter to a high street opticians'

'the communication between the team and myself has been so easy'

'ensuring..the best eye wear',

'seeability encourage my child to wear her glasses'

'lots of hints and tips on wearing glasses'

' helping my son get used to wearing his glasses'

'They changed the handles of the glasses to a more straight one around the ear due to my son's sensory issues'

'glasses that would be suitable for the specialist seating and head rests X had to use'.

' I never believed my child would be able to be assessed for his eyes due to his special needs but [the service] was able to make that happen'

'Children are often more comfortable in the school setting as it is familiar to them without seeing scary medical equipment. It also reduces the time away from school to have this apt within the school setting so as not to further impact on learning.'

'parents like myself would be devastated if this service were to be taken away from us.'

'[the service] was able to diagnose her evident lower field defect in her vision and this explains lots of her difficulties. and we are grateful'.

'[the team] were also able to diagnose X with CVI, something which other vision specialists have not picked up on. The diagnosis has helped us and school understand X's visual difficulties'.

Negative experiences with external services was a further recurrent theme

'For years she didn't have glasses because they couldn't assess her.'

'..hospital visits can be extremely stressful and challenging at times'

any special needs children suffer high anxiety and meltdowns often missing appointments but having this care provided in schools means the child can be seen in their familiar environment.'

'After years of anxiety and meltdowns at hospital appointments with my son your service has made a huge difference to us.'

‘Hospital is very stressful...[the service] quietly and calmly undid that fear, assessed her and gave her glasses that she won’t take off now because she can actually see’.

Discussion

The survey has a good response rate and reflects high levels of satisfaction, with over 96% of respondents (n=147) happy with the service. This aligns with the NHS commissioned evaluation of this model of in school eye care (NHS England, 2023), where of 115 parents/carers, 82% rated the service as excellent and 98% stated it met their expectations.

The reasons for the high level of unmet eye care need in this population are multifactorial (Donaldson et al., 2024). People with learning disabilities have a mean of 11.04 co-morbidities (Kinnear et al., 2018) so with competing multiple healthcare need, access to routine primary eye care is unlikely to be prioritised. The NHS contract used in community practice (General Ophthalmic Services Contract Regulations 2008) and lack of specialist pathways in primary care and concerns around cost are known barriers to access to primary eye care (Shickle, Davey, et al., 2015; Shickle, Todkill, et al., 2015). Parent comments confirm the common public perception that eye tests only are only possible if a person can subjectively engage with assessment. Parents also reported being refused access to primary eye care on the high street. This supports previous studies evidencing a lack of accessibility to primary eye care services. (Wilson et al., 2021) (Shah et al., 2007)

Where children do access eye care it is most often in the hospital eye service (Donaldson et al., 2019). Parental comments from our survey evidence high levels of stress and anxiety associated with hospital/ medical appointments for their children and a strong preference for the familiarity of the school setting, which in turn produced successful assessments and compliance with treatment (spectacle wear), which were strong themes. This, and competing health and support needs, go some way to explain the high level of missed appointments in hospital eye clinic (Jmor et al., 2014)

The school setting and communicating with the team around the child- class teaching staff, specialist teachers (such as qualified teachers for the visually impaired), speech and language therapists, school nurses, occupational therapists, habilitation professionals, paediatricians, can ensure a child’s visual abilities and needs, especially the need for spectacles, can be embedded in their Education, Health and Care plans and strategies to adapt to spectacle wear can be developed collaboratively and holistically.

The fragmented nature of other eye care services, and specifically spectacle dispensing rarely being offered in the hospital eye clinic, coupled with the complex spectacle dispensing needs of this population means often even where eye care is accessed, optimal vision is not achieved because spectacles are either not accessed or not worn successfully or consistently. In one study of an in school clinical model where spectacles were not provided (instead a prescription was provided which could be used to obtain glasses in a community optical practice), only 20% of pupils prescribed glasses were successfully using them at a 6 month follow up (Pilling & Outhwaite, 2017).

The service provided continuity of care with a regular team of optometrist and dispensing optician visiting the same school. This built trust with children, parents and teachers. Eye tests can be completed in more than one appointment where children's needs demand, for example when children become anxious or tire quickly. Missed appointments can be re-assigned and, where necessarily repeatedly rescheduled with minimal disruption and time out of education for the child and no time out of work for parents, as well as no wasted clinical time. Likewise, the dispensing optician can fit, supply, adjust and repair glasses as well as routinely check up on children with new or changed glasses prescriptions in the school setting, again with minimal detriment to routine and education. This presence in school also facilitates both teachers and parents understanding the impact of the glasses and strategies to support their use. 76.4% of parents/carers agreed having the dispensing optician in school was instrumental to success with glasses wear. This effectively addresses the previously evidenced poor level of successful glasses wear in this population (Pilling & Outhwaite, 2017)

'Helpful' and 'convenient' in the word cloud reflect specific comments on the importance of the service providing ongoing support with spectacle wear.

These findings evidence that the model including the specialist dispensing provision and ongoing support improves compliance with the most significant intervention to avoid visual impairment – spectacles.

Having visual problems explained to parents in a plain English report is shown to have a significant impact with 91.6% of parents agreeing they understood more about their child's eyes and vision from the service. The report also improves understanding for teaching staff. This can be assumed to have a significant positive impact on individual student's quality of life and supports previous studies which evidenced the positive impact of a report on each child's visual abilities and needs (Black et al., 2019; E McConnell¹, JA Little¹, S Black¹, JF McClelland¹, AJ Jackson², P Anketell², L McKerr³, 2019; McKerr et al., 2020). This increased understanding, along with support from the service in terms of provision of glasses and support to wear them will also likely lead to further significant improvements in compliance with spectacle wear, reducing incidence of avoidable visual impairment and improving quality of life and access to education. Parental comments confirm this.

We did not survey the views of the schools in this study. The independent evaluation of the NHS Special Schools Eyecare service (NHS England, 2023), of which this service is a part, found that 88% of schools reported that they would not change anything about the service. Furthermore 75% reported that they felt the service had had a significant social impact on their students including on learning and behaviour. The challenges that schools reported were administrative ones such as finding a suitable room for the clinic and the extra administrative burden of hosting the service.

Conclusion

The findings of this service evidence that parents and carers value the in- school service model provided, with school being strongly preferred as a location for an eye care and spectacle dispensing service. The service reduces the incidence of avoidable visual

impairment by improving successful use of glasses and improves parent/carers and teaching staff's understanding of each child's visual abilities and needs.

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