

## UK dyslexia charities should give balanced view on expensive lenses to improve reading

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UK dyslexia charities should give a more balanced account of the evidence for colored overlays and lenses in dyslexia say experts in *BMJ* today.

Between 3-6% of children in the UK have substantial difficulties learning to read, a condition often referred to as "dyslexia." They are at high risk of educational underachievement, explain consultant ophthalmologist Philip Griffiths and colleagues in an editorial.

An accumulation of evidence supports the view that dyslexia is a verbal (not visual) disorder, and shows that reading difficulties are best addressed by interventions that target underlying weaknesses in phonological language skills and letter knowledge.

Yet dyslexia is often associated with subjective experiences of visual distortions that lead to discomfort during reading (sometimes termed 'visual stress').

It has been argued that these symptoms can be alleviated through the use of coloured overlays and lenses - and that this can lead to an improvement in reading accuracy and fluency.

But a 2008 review of eight randomized controlled trials (RCTs) of coloured overlays and lenses concluded that the use of coloured filters "did not lead to a clear improvement in reading ability or symptoms of visual stress in subjects with reading disability."



A more recent review also concluded that "the evidence base did not support the use of colour in the management of reading difficulty."

Nevertheless, coloured overlays and lenses have become widespread in classrooms and higher education institutions as a core part of the remediation for reading difficulty, say the authors.

Possible reasons for this include uncritical reporting in the media and the lack of a body equivalent to the National Institute for Health and Care Excellence (NICE) reviewing the evidence base for educational interventions, they suggest.

Another important factor is endorsement from dyslexia charities.

So they reviewed information on the use of overlays and tinted lenses provided by the websites of prominent dyslexia charities, eight from within the UK and three from English-speaking countries outside the UK.

Six of the eight UK charities provided information about coloured overlays and lenses in dyslexia. In all six cases, the message was one of endorsement, and the conflicting nature of the evidence base was not discussed.

The three overseas charities presented a different picture. Dyslexia Ireland includes the use of overlays under the section on alternative or complementary therapies. While both the International Dyslexia Association and Specific Learning Difficulties Australia provide links to academic websites that take a sceptical view of the existence of visual stress and treatment with overlays.

The endorsement by charities also contrasts with the advice issued by the professional bodies, whose members encounter children and adults with



reading difficulties, add the authors.

For example, a recent joint statement from the American Academy for Pediatrics, Council for Children with Disabilities, American Academy of Ophthalmology, American Association for Pediatric Ophthalmology and Strabismus and the American Association of Certified Orthoptists concluded that "... scientific evidence does not support the efficacy of ... special tinted filters or lenses in improving long term educational performance."

Similarly, a review for the Royal College of Ophthalmologists concluded that "manipulation of the visual system using colour to facilitate reading lacks scientific support."

"It is of great concern that so many UK dyslexia charities are giving an inaccurate account of the evidence for the use of coloured lenses and overlays for managing <u>reading difficulties</u>," write the authors. "Individuals using these websites could be persuaded to spend large amounts of money on precision tinting systems, or expect the NHS to support this."

They acknowledge that dyslexia charities offer a valuable source of information about dyslexia and its management, and that advice on coloured overlays and <u>lenses</u> is only a small part of the information provided.

However, they conclude that "an evidence-based approach from UK dyslexia charities educated by good science would enable the public to make a more informed choice."

More information: BMJ, www.bmj.com/content/349/bmj.g5160



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