## **Editorial**

## 'Reasonable accommodation' for medical professionals with congenital colour vision deficiency

Congenital colour vision deficiency (CCVD) is prevalent in the medical fraternity. A body of literature, which includes only a few studies from India, has shown that people with CCVD can experience difficulties during medical or dental education, during training in a specialization of their choice and later when they practise in their chosen field. <sup>1-5</sup> How should we deal with this information keeping in mind the need to protect the rights of the medical professional as an individual and also the need to protect their patients?

Although the Supreme Court has exhorted the Medical Council of India to stop discriminating against students with CCVD during admissions, no clear guidelines exist on what to advise such students once they are admitted to a medical course. How should they navigate the medical curriculum so that CCVD does not hamper learning? What strategies should they employ to safeguard their patients from any potential harm? What medical or surgical specialty should they consider appropriate for training after graduation? What should be the role of teachers?

These questions have been addressed in a review published in this issue of the *Journal*. The author highlights that in many western countries those with CCVD are not debarred from training in a specialty of their choice. First, it is recognized that performance during a clinical test of colour vision cannot accurately predict the performance in real-life situations. Second, because they have been dealing with their altered colour perception since birth, people accommodate to the deficiency and begin to rely on cues other than colour. Finally, just as no two individuals with normal colour vision have quite the same colour perception, anomalies in colour vision are extremely variable and the level of difficulty experienced as a result may also be variable and unpredictable. Thus, the question of choice of specialty should be considered on an individual basis rather than being lumped together as a group of people with CCVD. It would be discriminatory to debar all students with CCVD from training in a particular specialty without considering each one's distinctive abilities or disabilities in that specialty. In an extensive review of the literature, Chakrabarti affirms that it is only fair to allow people with CCVD to make their own choices of specialty based on a self-realization of their limitations.

As medical teachers, we have a responsibility to our students with CCVD. Chakrabarti discusses many strategies and the rationale behind their recommendations. Committees for admissions to medical institutions uniformly, all over India, must require colour vision testing for all new entrants. Those found to have CCVD should be counselled about their condition and be advised to ask for help in navigating the problems they face, if any, because of their altered colour perception. Specialty teachers should be prepared to help students with CCVD explore their specific limitations and help them find innovative ways to learn and to compensate using cues other than colour. La.13 If they did that, teachers would be making 'reasonable accommodation' for these students. Reasonable accommodation is defined in the United Nations' Convention on the Rights of Persons with Disability (to which India is a signatory) as a 'necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms ...'14

It is often argued that CCVD is not a disability in the true sense of the definition: 'Persons with disabilities include those who have long-term physical, mental, intellectual

or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.' Probably for this reason, CCVD is not included in the list of disabilities that entitle one to benefits and concessions under the Rights of the Persons with Disabilities Act, 2016 even though the government has enhanced the number of disabilities that fall under its purview to 21 (from the previous 7); however, this does not mean that the topic should not be adequately addressed. Doctors with CCVD do exist, and the problems they face need exploration if only from the point of view of human rights and patient safety.

But we need more data. We need to hear the voices of medical practitioners with CCVD—nothing about them without them. 'Nothing About Us Without Us' is a slogan that has been used in disability activism since the 1990s to convey the idea that no policy decisions for people with disability should be made without their full and direct participation in the making of that policy. <sup>16</sup> The medical community and policy-makers would be better informed about how to manage the issue if doctors share their experiences of practising with CCVD. It is up to the medical fraternity to provide a forum where they can speak without fear of being judged, shamed, isolated or ostracised.

## **ACKNOWLEDGEMENTS**

I am deeply grateful to Dr Satendra Singh, Associate Professor of Physiology and Disability Rights Activist and to Dr Navjeevan Singh, former Director-Professor of Pathology, University College of Medical Sciences (University of Delhi) for enhancing my understanding of disability.

Conflicts of interest. None declared

## REFERENCES

- 1 Dhingra R, Rohatgi J, Dhaliwal U. Preparing medical students with congenital colour vision deficiency for safe practice. Natl Med J India 2017;30:30-5.
- 2 Spalding JA. Medical students and congenital colour vision deficiency: Unnoticed problems and the case for screening. Occup Med (Lond) 1999;49:247–52.
- 3 Campbell JL, Griffin L, Spalding JA, Mir FA. The effect of abnormal colour vision on the ability to identify and outline coloured clinical signs and to count stained bacilli in sputum. Clin Exp Optom 2005;88:376–81.
- 4 Reiss MJ, Labowitz DA, Forman S, Wormser GP. Impact of color blindness on recognition of blood in body fluids. Arch Intern Med 2001;161:461–5.
- 5 Ethell J, Jarad FD, Youngson CC. The effect of colour defective vision on shade matching accuracy. Eur J Prosthodont Restor Dent 2006;14:131–6.
- 6 Choudhary AA. Make colour blind aspirants eligible to be doctors: Supreme Court panel. Times of India, 30 July 2017. Available at www.timesofindia.indiatimes.com/india/make-colour-blind-aspirants-eligible-to-be-doctors-supreme-court-panel/articleshow/59827321.cms (accessed on 1 Dec 2017).
- 7 Chakrabarti S. Psychosocial aspects of colour vision deficiency: Implications for a career in medicine. Natl Med J India 2018;31:87–97.
- 8 Siu AW, Yap MK. The performance of color deficient individuals on airfield color tasks. Aviat Space Environ Med 2003;74:546–50.
- 9 Buchanan K. Why colour blindness does not amount to a disability in law, in spite of its drawbacks. Belfast Telegraph, 2017. Available at www.belfasttelegraph.co.uk/business/northern-ireland/why-colour-blindness-does-not-amountto-a-disability-in-law-in-spite-of-its-drawbacks-36350797.html (accessed on 1 Dec 2017).
- 10 Neitz J, Jacobs GH. Polymorphism of the long-wavelength cone in normal human colour vision. *Nature* 1986;323: 623-5.
- 11 Neitz J, Neitz M. The genetics of normal and defective color vision. Vision Res 2011;51:633-51.
- 12 Rubin LR, Lackey WL, Kennedy FA, Stephenson RB. Using color and grayscale images to teach histology to color-deficient medical students. Anat Sci Educ 2009;2:84–8.
- 13 Spalding JA, Cole BL, Mir FA. Advice for medical students and practitioners with colour vision deficiency: A website resource. Clin Exp Optom 2010;93:39–41.
- 14 Office of the United Nations High Commissioner for Human Rights. Convention on the Rights of Persons with Disabilities. Available at www.ohchr.org/EN/HRBodies/CRPD/Pages/ConventionRightsPersonsWithDisabilities. aspx#2 (accessed on 30 Nov 2017).
- 15 The Rights of Persons with Disabilities Act, 2016. Gazette of India (Extraordinary); 26 December 2016. Available at www.lawmin.nic.in/ld/P-ACT/2016/A2016-49.pdf (accessed on 30 Nov 2017).
- 16 Iezzoni LI, Long-Bellil LM. Training physicians about caring for persons with disabilities: 'Nothing about us without us!'. Disabil Health J. 2012:5:136–9.

UPREET DHALIWAL

Formerly Department of Ophthalmology University College of Medical Sciences and Guru Teg Bahadur Hospital New Delhi

> A-61, Govindpuram Ghaziabad 201002 Uttar Pradesh upreetdhaliwal@yahoo.com