Color Vision in the Occupational Setting: Analysis and Testing

Bernard Blais. 85 pp, 2008. Richmond Products. ISBN: 978-0-9718598-5-2. Available at: https://webportal.acoem.org/Purchase/SearchCatalog.aspx.

Scope

The book is designed to help people in the field of occupational medicine for screening and diagnosis of color deficiency. The book first discusses the trichromatic theory of color vision and examples of the common color deficiencies. The author reviews different types of tests available for color vision including the use of pseudoisochromatic plates using either the Ishihara test plates or the Hardy, Rand, and Rittler plates and more sophisticated tests such as the Farnsworth 100-Hue arrangement test, and the D15 variant of that test. In addition, he discusses the Nagel anomaloscope and outlines the appropriate testing to be done for screening and also more detailed testing.

Strengths of the Book

This book beautifully shows examples of how patients see the world with different types of color vision defects. For example, it shows a picture of ripe red fruit among green leaves—as it appears normally and then how it appears to someone with red-green color deficiency. There are multiple examples that give a better understanding of problems encountered by people who are color deficient. The book is comprehensive with useful lists and tables of tests for evaluating subjects.

Weaknesses

Unfortunately, the quality of the writing is variable, making it sometimes difficult to follow. There are also politically incorrect and redundant terms, which I think should be corrected in the next edition. The biggest weakness of the book is that the testing in many cases is too complicated for someone other than an ophthalmologist. There are, however, useful general guidelines for occupational physicians and other providers of occupational health care.

Critical Appraisal

The book is a valuable addition for color vision testing for occupational health professionals. Although there are weaknesses in the writing style, the illustrations of color deficiency are dramatic and impressive and will help anyone understand these problems better.

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DOI: 10.1097/JOM.0b013e31819d849b