

Neuro Visual Rehabilitation Center

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**Leona Vermeire
Rainbow-Flash**

Dear Leona:

You requested that I write to you about my experience with your Computerized Functional Colour Field Tester. I have been using your instrument for several years on all of my patients that I recommend visual rehabilitation for. In my office, all patients that I see have an initial comprehensive eye health and visual examination. If after this evaluation it is determined that a patient has a binocular visual dysfunction then they are rescheduled for an in depth Developmental Visual Evaluation to determine the cause and degree of their particular binocular visual problem.

The Developmental Visual Evaluation consists of a battery of several standardized tests to analyze the exact cause and degree of the binocular visual problem(s). I have found that there is a high correlation between five of the standardized tests from my test battery and your Computerized Functional Colour Field Test. As you know, under stress, the human body response is to draw in or constrict. This predicable response can clearly be seen in a patient's subjective response on these five tests and Colour Field Testing.

The five standardized tests that show the highest correlation are the Keystone Visual Skills Profile, Van Orden Binocular Vision Space test, Visual Evoked Potential (VEP) test, Test of Visual-Perceptual Skills (TVPS) and the Berry. I also determine what I call

a patient's Visual Perceptual Index (VPI), which is the mean average between a patient's TVPS (non-motor) and Berry (motor) score. Example of this would be if a patient's TVSP score was 60 and their Berry score was 100, then their VPI would be 80. The higher the VPI (>75) the easier, quicker and more successful the visual rehabilitation program seems to be while the lower the VPI (<75) the harder, slower and more marginal the predictable visual rehabilitation program results. The VPI is not an absolute but rather an indicator of predictable treatment difficulty and overall case outcome.

I have enclosed two patient case studies to show you how these five tests and your Colour Field test results can be used to predict possible treatment outcome. I also use these pre and post therapy changes to demonstrate to the patient their improvement. Care number one is SW who is a 12 year old girl with the diagnosis of Convergence Insufficiency, Binocular Fusional Dysfunction and Visual Perceptual Disturbance. The Colour Field test showed a mean average increase in the right colour field of + 3.4' and the left field of +4.7'. The Keystone Visual Skills Profile showed a post treatment condition of more stable and flexible binocular visual posture. The Van Orden Binocular Space test showed a more post stable and exacting eye hand placement. The VEP showed a post faster Latency (impulse speed) and a stronger Amplitude (Impulse Strength). The TVPS showed an 85% rank improvement with a + 5 years 6 months visual perceptual age gain.

Care number two is OV who is a 8 year old girl with the diagnosis of Convergence Insufficiency, Binocular Fusional Dysfunction and Visual Perceptual Disturbance. The Colour Field test showed a marked increase in both the right and left colour fields. The Keystone Visual Skills Profile showed a post treatment condition of more stable and flexible binocular visual posture. The Van Orden Binocular Space test showed a more post stable and exacting eye hand placement. The VEP showed a post faster Latency (impulse speed) and a stronger Amplitude (Impulse Strength). The TVPS showed a 44% rank improvement with a + 4 years 9 months visual perceptual age gain.

In both of these cases, it is very apparent that there has been a marked increase in the patient's color field sensitivity after visual rehabilitation. I have found that the patient can readily understand and appreciate not only the initial state of their visual dysfunction(s) but also the overall improvement or resolution of their visual condition(s).

Because of the obvious behavioral pattern indicated in colour field testing, I think that your Computerized Functional Colour Field Tester could be used as a very good screener for more involved potential binocular visual dysfunctions. Constricted colour fields should merit a more in depth developmental visual evaluation.

I hope that my experience and application of your technology will be helpful to others who may wish to take advantage of color fields testing.

Sincerely,


William E. Leadingham, O.D., FCOVD