VISUAL PROCESSING PROBLEMS

How to carry out a screening

Sylvia Moody

In this information pamphlet, you will find:

- Frequently asked questions.
- Description of typical visual processing problems.
- Checklist for visual processing problems in reading.
- Protocol for carrying out a five-minute screening.
  (Provided by David Grant)

IMPORTANT

Screening with overlays should be carried out before any cognitive, phonological or literacy tests are done.

Some clients may need an overlay not just for reading but also for some of the perceptual and information processing tests in the WAIS / WRIT batteries.
1. Frequently asked questions

Am I qualified to screen for visual processing problems?
Any SpLD assessor (diagnostic or needs) or tutor should be able to screen for these.

What visual processing problems should I be looking out for?
(1) Visual stress.
   Symptoms: seeing print/patterns moving about on the page and finding white paper 'glaring'.
(2) Binocular vision problem.
   Symptoms: losing place on a page of text, missing out words, mis-reading words, reading or writing numbers incorrectly, seeing double of the text, words moving about, brow/headache, tiredness when reading.

How do I carry out a screening?
You administer a checklist (see page 4) and carry out a brief trial with coloured overlays (see page 5).

What are the criteria for suggesting an optometry referral?
If any indications of visual problems are found on the checklist (whether or not the client finds an overlay helpful), then it is appropriate to refer the client to an optometrist. Ideally the optometrist should check for binocular vision problems as well as offering a colorimetry consultation.

Where can I find an optometrist?
A list of approved practitioners can be found on the website of the Institute of Colorimetry: info@colorimetryinstitute.org. Some of the listed practitioners work in eye clinics attached to hospitals. The Society for Coloured Lens Prescribers also provides a list of practitioners at www.s4clp.org, but please note that these are not regulated by the Institute's Code of Practice.

What if my client can't afford an optometry consultation?
You could keep a stock of overlays (packs of five in ten colours are available from the Institute of Optometry) and sell/give clients an overlay of their preferred colour. Or, as second best, suggest they use a coloured plastic wallet, available from stationer's shops. You could also suggest they consult an optometrist at some future date when they have the necessary funds.
2. Visual factors in reading difficulties

It has been estimated that around 40% of people with specific learning difficulties also have subtle visual problems, as do some people who have no specific learning difficulties. Symptoms can include:

- headaches / brow-ache
- eye strain
- seeing visual perceptual distortions:
  - text appearing to change, move or swim on the page
  - shapes or patterns moving on the page
  - bright-coloured text or images ‘flashing’
  - white paper ‘glaring’
- focusing on rivers between the words, not the words themselves
- tiring quickly when reading
- becoming fidgety
- losing concentration
- losing place on page
- missing out bits of text
- experiencing blurred or double vision
- closing or covering one eye when reading
- reluctance to read

Treatments could include:

- corrective spectacles.
- evidence-based eye exercises (orthoptics)
- coloured overlays or tinted spectacles
- coloured screen monitors
- page/screen reading rulers
3. Checklist for visual processing problems

* Strong indicator of binocular vision problem  + Strong indicator of visual stress.

1. Does reading make you tired? .................................................................  
2. Do you often lose your place when reading? ........................................  
3. Do you re-read or skip lines when reading? ...........................................  
4. Do you read words / numbers back to front? ......................................  
5. Do you miss out or mis-read words when reading? .............................  
6. Do you use a marker or your finger to keep the place? ........................  
7. Are you easily distracted when reading? ..............................................  
8. Do you become restless or fidgety when reading? ...............................  
9. Do you get headaches when you read? ...............................................  
10. Do your eyes become sore or water? .....................................................  
11. Do you screw your eyes up when reading? ..........................................  
12. Do you rub or close one eye when reading? .........................................  
13. Do your difficulties increase the longer you read? ..............................  
14. Do you prefer dim light to bright light for reading? .............................  
15. Does white paper (or white board) seem to ‘glare’? ...........................  
16. Does print seem to move about on the page as you read? ....................  
17. Does print become distorted or shimmer as you read? .........................  
18. Do you find striped patterns uncomfortable to look at? .....................  
19. Is it uncomfortable to read under fluorescent lighting? .......................  

Further comments?

Checklist author: Melanie Jameson
4. Screening with coloured overlays

The following procedure has been recommended by David Grant:

Select four 100-word-long passages from an up-market newspaper, such as the Guardian, which has a small font and lines running closely together. Photocopy these passages onto four separate sheets of white A4 paper.

Ask the client to read two of the passages aloud without an overlay. Stress that he (he = he/she) should read at a fast but still comfortable pace, and not worry about trying to remember what he is reading. The first passage can be treated as a warm-up passage.

Note the speed in seconds for the second passage, and translate into words per minute. For example, if the client needs 40 seconds to read the passage, then: \[\frac{60}{40} \times 100 = 150\text{ wpm}.\]

Then ask the client if he sees any distortions in the print, if the lines seem to run together, or if the white background seems uncomfortable.

If the client's reading speed is above 200 wpm, if he reads with both fluency and expression, and if he reports no textual distortions, discontinue the screening at this point. Otherwise proceed as follows:

Present him with an A4 page of text (unrelated to the 4 short passages). Cover half the page with an overlay and ask him whether it makes the text easier to read.

Whether he says yes or no, place another overlay by the side of the first one and ask him if this is more helpful.

Continue to juxtapose overlays in this way, always asking the client to choose the preferred colour of each pair until you have completed the comparison of all colours.

Now, using the best colour, place it over the third 100-word passage and ask the client to read the passage aloud. Note the time in seconds and translate it into words per minute.

(If the client is unable to decide which of two colours is the more helpful, use the fourth short passage to determine which colour results in a faster reading time.)

Encourage the client to use his/her preferred overlay on relevant cognitive, phonological and literacy tests, and record in your report on which tests he finds it useful to do so.

© Sylvia Moody. This article can be reproduced with due attribution of authorship.