Assessing Visual Perception
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15 PUBLICATIONS 14 CITATIONS

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62 PUBLICATIONS 741 CITATIONS

Some of the authors of this publication are also working on these related projects:

- The Back of the Brain (BoB) project View project
- Developmental prosopagnosia View project
Assessing Visual Perception: Towards a Systematic Approach

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Background
Visual perceptual deficits are common in neurological disorders:
- seen in around 30% of patients with acquired brain injury.
- also common in neurodegenerative disorders.
Can have significant negative effects on:
- activities of daily living, mental health and quality of life.
- general rehabilitation.
- performance on all neuropsychological tests using visual stimuli.
Visual perception should be assessed following brain injury.
The literature does not provide a simple overview of tests available.

Aim
Create a framework that facilitates structured and systematic assessment of visual perceptual functions.

Method
- Visual perceptual tests and test batteries are identified in the literature.
- Tests and batteries are categorised according to their visual sub-processes.
- A simple visual framework is developed.

Conclusion
Assessment should also be carried out in the absence of visual perceptual complaints (insight often limited).
Existing test batteries suffer from limitations:
- lack of norms
- too time-consuming
- only selected aspects of visual perception assessed
- include tests of functions that are theoretically relevant but that have limited clinical value
By combining individual sub-tests from different batteries, in-depth assessment is possible, but:
There is a need for a test battery enabling structured assessment of clinically relevant aspects of visual perception.

Words
- Paper 29: Reading words
- Paper 35: Reading regular vs irregular words
- EC301-R: Reading digits
- Reading text
- Picture naming tasks (WAB 4.1, Boston Naming)
- Naming familiar faces

Objects
- Object vs non-object: BORB 10
- Object and Space Perception Battery (BORB 10)
- Benton Visual Form Discrimination Test
- Copying: Rey’s Complex Figure
- Matching: Benton Face Recognition Test

Faces
- Naming familiar faces
- Naming famous faces
- Face Matching: BORB 10
- Freiburg Object Recognition Battery
- Leuven Perceptual Organisation Screening Test
- Object and Space Perception Battery
- Colour discrimination: CORVIST 5
- Naming (colours of objects in the environment)
- Colour matching: Homemade cards
- Shape perception: CORVIST 4

Shape discrimination: CORVIST 4
- Naming: CORVIST 4
- Shape detection: CORVIST 4

Dorsal pathway: Where? How?
Visual-motor transformations
Visual-motor representations

Semantic representations
Structural representations
Integration
Segmentation

Size Discrimination
- CORVIST 3
- BORB 3

Copying simple figures
- CORVIST 4
- BORB 3
- Copying: Rey’s Complex Figure
- Matching: Benton Face Recognition Test

Simple shape perception
- Line orientation: Benton Line Orientation Test
- Naming simple shapes
- Form discrimination: CORVIST 2

Shape integration
Distinguish overlapping figures: Propeller
Integrating fragmented stimuli:
- Fragmented digits/letters: VOSP 1, CORVIST 7
- Shape detection: VOSP 0, CORVIST 4

Visual field
- Confrontation: Donders’ test
- Computer-based perimetry (e.g.: Humphrey or Goldmann)
- Screening for visual field defects
- Humphrey (50.15 degrees)
- Left: Right

Colour perception
- Colour discrimination: CORVIST 5
- Farwell-Munsell D-15 100 hue test: physical or online version
- Colour matching: Homemade cards
- Pointing (Token test 1, WAB auditory word recall)
- Naming (colours of objects in the room)
- CORVIST 5
- D-15

Motion detection
- Motion detection from L-POST
- 7. Global Motion Detection
- 9. Binocular Motion

Related functions
- Visual attention: Neglect
- Similariaagnosis
- Visual search
- Oculomotor apraxia
- Optic ataxia
- Topographical orientation
- Oculomotor apraxia
- Topographical orientation
- Motion perception
- Colour perception
- Shape perception
- Integration
- Semantic representations
- Structural representations
- Visual-motor representations
- Visual-motor transformations
- Frontal pathway: What?