



An Occupation-Based Approach to Cognitive- Perceptual Assessment: The A-ONE

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Making Cancer History®

World Health Organizations ICF

- Body system impairment*
- Activity Limitations*
- Participation Restrictions

*A-ONE evaluates two levels.

Practice Framework: (client factors and
areas of occupation)

Issues Regarding Cognitive-Perceptual Assessment

- What level(s) are we evaluating?
- Whose tools are we using?
- What is our unique (DISTINCT) contribution?
- Deficit specific?
- What context(s) are we evaluating?
- Realistic use of activities?
- Ecological Implications....?

Table-Top/pen & Paper Evaluations: Concerns

- Does not allow integration of motor/visual/cognitive skills.
- Deficit specific.
- Can they diagnose? Ex. Praxis
- 2 dimensions in a 3D world
- ? Relationships between testing/function.
- Predictive?
- Are we trained?
- Is it within in OTs domain?
- Even the originators question validity.

Further Concerns

- Client's perspective of therapy.
- Bottom-up only.
- Time consuming.
- May infantilize.
- Can you develop a function-based Tx plan from a non-functional assessment?
- TX decisions: Are we treating the impairment or performance deficit?

A-ONE

ADL-Focused
Occupation-Based
Neurobehavioral
Evaluation

Quick Case Examples from Practice

- Stopped a discharge
- Changes in Behavior

Population:

- Over 16 years old (norms presently being compiled for school age children)
- CNS dysfunction of cortical origin
- Acute care to community re-entry
- DX: vascular disorders, metabolic disorders, head injuries, infections, toxins, tumor, CNS degeneration, dementia, etc.

Equipment/Location

- Bedside (with sink) at realistic time
- Clients personal ADL items (clothing, shaving equipment, makeup, etc.)
- *items placed within reach and on both sides of the client to elicit a scanning response

Scoring

Independence Score	Neurobehavioral Score
4 = Independent and can transfer activity to other environments	0 = No impairment
3 = Independent with supervision	1 = Able to perform but neurobehavioral deficit(s) noted
2 = Verbal assist	2 = Verbal assistance
1 = Physical assist	3 = Physical assistance
0 = Dependent	4 = Unable to perform due to neurobehavioral deficit

ADL Domains

- Dressing
- Grooming and Hygiene
- Transfers and Mobility
- Feeding
- Communication

Specific Impairments Assessed During ADL/Mobility

- Motor Apraxia
- Ideational Apraxia
- Unilateral Body Neglect
- Somatoagnosia
- Spatial Relations
- Spatial Neglect
- Perseveration
- Organization/ Sequencing
- Topographical Disorientation
- Aphasia

Pervasive Impairments

- Sensory/Agnosia
- Body-Scheme Disturbance
- Affective Disturbance
- Cognitive Disturbances
- Memory
- Other

Validity/Reliability

- Content Validity: literature review and expert opinion.
- Concurrent: Katz ADL, Barthel Index, MMSE, BIT*, MVPT*, FIM* (*In progress).
- Test-retest= .85
- Interrater reliability: .84 (with training)
- Rasch analyses recently completed and published in *AJOT* and *Neurorehabilitaion and Neural Repair*

Examples of how the A-ONE
detects underlying cognitive-
perceptual deficits that are
interfering with function.... *Error
analysis during the skilled
observation of functional tasks.*

Table 3
Linearized Hierarchies of Impairments (From Least to Most Likely) Interfering With ADL Task Performance in Patients With LCVA, RCVA, and Dementia^a

	LCVA	RCVA	Dementia
Less frequently observed errors ^b to more frequently observed errors ^c	3.41 Dressing unilateral spatial neglect	3.90 Transfers and mobility ideational apraxia	4.44 Transfers and mobility unilateral body neglect
	3.41 Dressing perseveration		
	3.41 Feeding unilateral body neglect	3.63 Pervasive irritability	4.44 Transfers and mobility unilateral spatial neglect
	3.41 Feeding unilateral spatial neglect	3.63 Pervasive confusion	
	3.41 Feeding perseveration	3.63 Pervasive motivation	4.42 Feeding unilateral body neglect
	3.41 Grooming and hygiene unilateral body neglect	2.62 Dressing ideational apraxia	3.39 Grooming and hygiene unilateral body neglect
	3.41 Grooming and hygiene unilateral spatial neglect	2.62 Grooming and hygiene ideational apraxia	3.22 Grooming and hygiene unilateral spatial neglect
	3.33 Transfers and mobility perseveration	2.62 Communication paraphasia	3.19 Feeding unilateral spatial neglect
	3.30 Pervasive confabulation	2.62 Communication expressive aphasia	2.65 Dressing unilateral body neglect
	3.24 Pervasive irritability	2.38 Communication sensory aphasia	2.20 Dressing unilateral spatial neglect
	2.17 Dressing unilateral body neglect	2.36 Pervasive frustration	1.87 Transfers and mobility spatial relations
	2.17 Transfers and mobility unilateral	2.32 Pervasive confabulation	
		1.81 Feeding ideational apraxia	1.61 Communication expressive

0.81 Pervasive attention	-0.19 Feeding spatial relations	-0.28 Pervasive irritability
0.15 Pervasive motivation	-0.41 Transfers and mobility spatial relations	-0.30 Pervasive distraction
0.06 Feeding organization and sequencing	-0.41 Feeding organization and sequencing	-0.37 Dressing motor apraxia
-0.04 Transfers and mobility ideational apraxia	-0.63 Pervasive initiative	-0.45 Pervasive attention
-0.78 Pervasive initiative	-1.04 Pervasive attention	-0.46 Pervasive initiative
-0.95 Pervasive insight	-1.19 Dressing unilateral spatial neglect	-0.51 Grooming and hygiene perseveration
-1.09 Dressing ideational apraxia	-1.19 Grooming and hygiene unilateral spatial neglect	-0.64 Communication anomia
-1.12 Grooming and hygiene ideational apraxia	-1.19 Transfers and mobility unilateral spatial neglect	-0.70 Grooming and hygiene motor apraxia
-1.20 Transfers and mobility motor apraxia	-1.73 Grooming and hygiene unilateral body neglect	-0.99 Pervasive confusion
-1.31 Pervasive judgment	-1.92 Transfers and mobility unilateral body neglect	-1.17 Dressing spatial relations
-1.74 Feeding motor apraxia	-2.01 Pervasive insight	-1.27 Grooming and hygiene ideational apraxia
-1.88 Dressing motor apraxia	-2.29 Dressing spatial relations	-1.48 Dressing ideational apraxia
-2.32 Grooming and hygiene motor apraxia	-2.68 Grooming and hygiene organization and sequencing	-1.48 Feeding organization and sequencing
-2.32 Pervasive working memory	-2.68 Transfers and mobility organization and sequencing	-1.63 Transfers and mobility organization and sequencing
-2.60 Communication sensory aphasia		-2.48 Transfers and mobility topographical disorientation
-2.78 Transfers and mobility organization and sequencing		-2.95 Pervasive judgment

(continued)

Conceptual Definition

Ideational Apraxia:

A breakdown in knowing what is to be done in order to perform. Loss of the concept required for performance. Loss of knowledge regarding object use. Difficulty sequencing activity steps or using objects in relation to each other.

Operational Definition

Ideational Apraxia:

Does not know what to do with ADL equipment (fork, toothbrush, etc.).

Uses tools inappropriately, ex. smears toothpaste on face.

Sequences activity incorrectly so that there are errors in the end result, ex. socks on top of shoes.



Conceptual Definition

Perseveration:

Repeated movements or acts during functional performance as a result of difficulty in shifting from response to another.

Repetition of the same movement or repetition of whole actions.

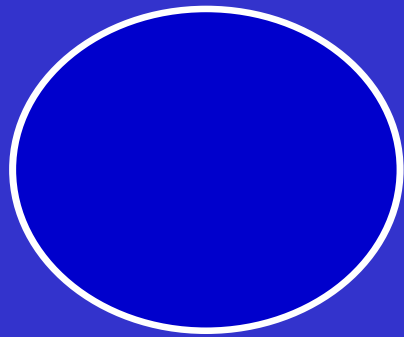
Operational Definition

Perseveration:

Repeats movements or acts and cannot stop once started (ex. brushing one part of the mouth or keeps pulling on socks after it is on the foot).

Pen and paper evaluation of
perseveration versus function
based observations based on
the A-ONE

Premotor perseveration



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Operational Definition

Unilateral Spatial Neglect/Inattention:

Inattention to or neglect of stimuli presented in the extra personal space on the side contralateral to the lesion.

Results from visual perception deficits or impaired attention.

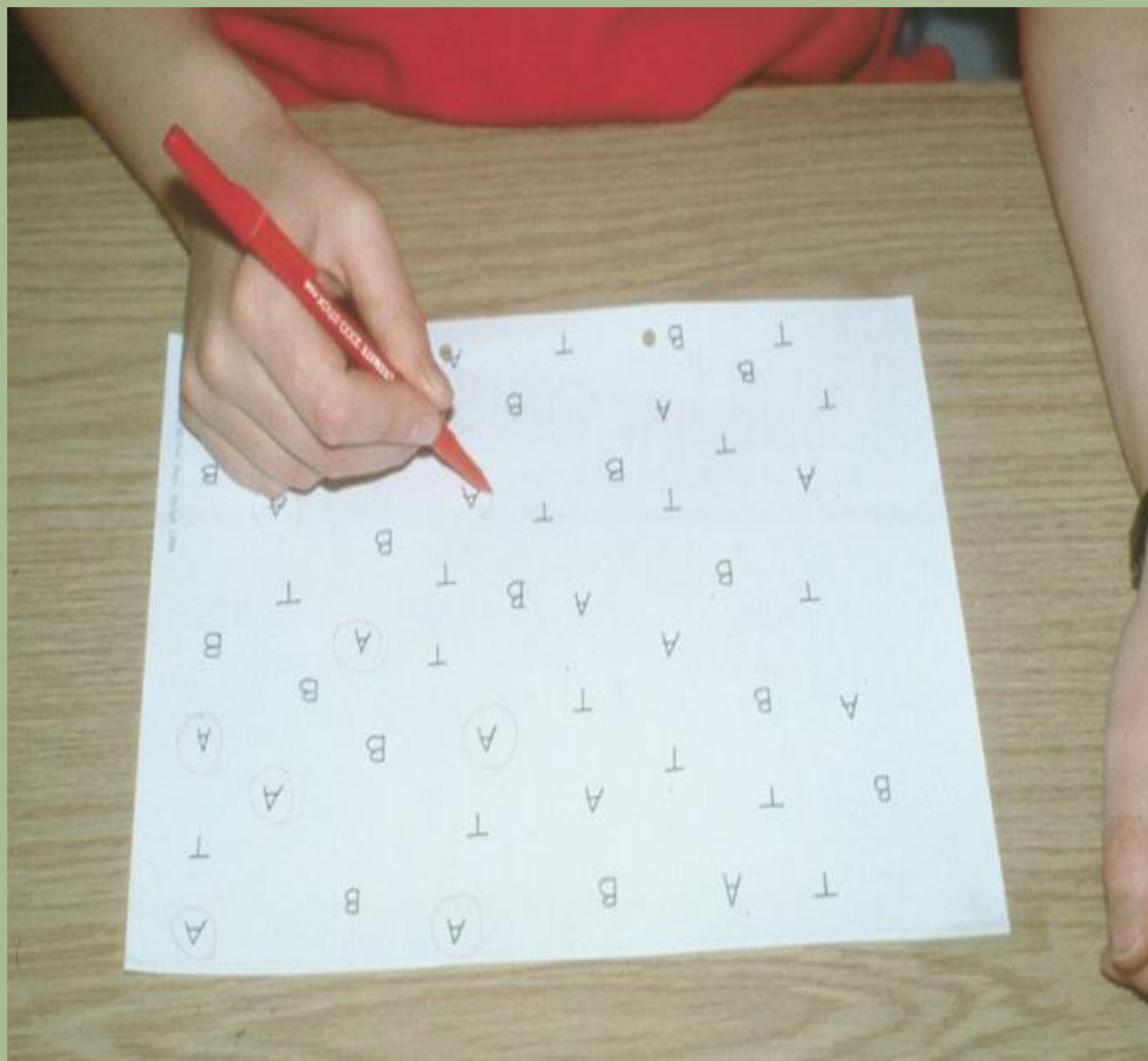
May occur independently visual deficits.

Operational Definition

Unilateral Spatial Neglect/Inattention:

Does not account for objects in the visual field of the affected side; wheels into furniture or doorways when moving in the affected field, etc..

Pen and paper evaluation of
neglect versus function based
observations based on the
A-ONE







Conceptual Definition

Spatial Relations Dysfunction:

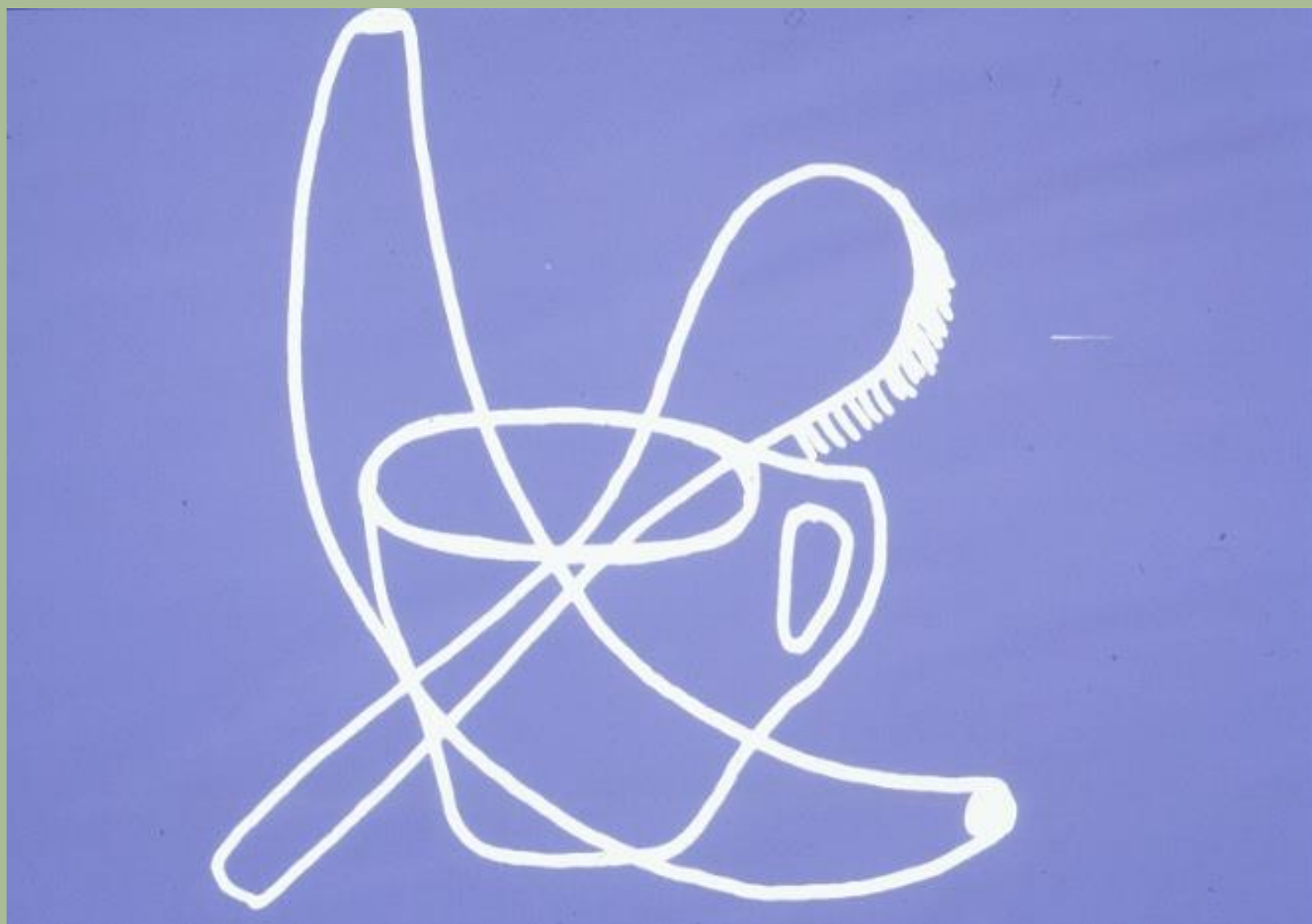
Difficulties in relating objects to each other, or to self. May be due to visual-spatial impairment such as: depth perception, figure-ground, spatial relations, etc.

Operational Definition

Spatial Relations Impairment:

Unable to find armholes, leg holes, or top of shirt.
Over or under

Pen and paper evaluation of
spatial relations impairment
versus function based
observations based on the
A-ONE















Video for Observation

A-ONE Course

- 5 days.
- Operational definitions.
- Content: overview, neuroanatomy review, videotape analysis/scoring, group problem solving, review of relationship of cortical dysfunction to ADL dysfunction.
- Practice.

A-ONE Facts

- Courses have been held in: USA, Holland, Hong Kong, Denmark, Norway, Sweden, Canada, Australia, Iceland, Finland, Switzerland

Strengths

- Time-saver
- Highlights OT's unique perspective
- Comprehensive battery
- Naturalistic context
- Rejects dichotomy between function and impairment based assessment
- Uses relevant tasks as the basis of evaluation
- Rejects reliance of pen-paper (borrowed evaluations)
- Tracks change over time
- Highly compatible with the FIM

- Requires training
- Limited to BADL and mobility
- Limited to clients over 16 who have CNS dysfunction (normative data is now being analyzed for school aged children).

Information to take or
sponsor an A-ONE
course:

Please Contact:
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