Naming impairment in Dutch patients with MS – Explorative study

MASTER THESIS OF ROBIN ‘T HART

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Introduction

Word-finding difficulties
- What?
- When?
- What do patients experience?
- Diagnosis?
- Treatment?

Motivation for research
Objectives

1. Do MS patients experience word-finding difficulties?
   - Are MS patients able to tell that they have a naming impairment?

2. What is the relationship between naming impairment, cognition and disease disability?

3. Which (distorted) underlying processes may influence a naming impairment?
Nederlandse Benoem Taak (Dutch Naming Test)
Diagnosis of naming impairment.

VAS-Schaal
'Self-reported severity' of word-finding difficulties.

MOCA
Cognitive functioning.

EDSS
Disability score.
1. Do MS patients experience word-finding difficulties?
   - Are MS patients able to tell that they have a naming impairment?
2. What is the relationship between naming impairment, cognition and disease disability?

MOCA and Dutch Naming Test

MOCA explains 49.6% of Dutch Naming Test

Sub-tests (52.9%):

Attention;
Orientation;
Abstraction.
3. Which (distorted) underlying processes may influence a naming impairment?

Classification:
- Fonological;
- Semantic;
- Visual;
- Others.
<table>
<thead>
<tr>
<th>Ridder</th>
<th>Knight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soldaat</td>
<td>Soldier</td>
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<td>Middeleeuwen</td>
<td>Middle Ages</td>
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<tr>
<td>Prins</td>
<td>Prince</td>
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<td>Noorman</td>
<td>Northman</td>
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<tr>
<td>Playmobil</td>
<td>Playmobil</td>
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</tbody>
</table>
Slot
- Handtas
- Shopper
- Boodschappentas

Lock
- Purse
- Shopper
- Shopping bag
Eiland | Island
--- | ---
Vis | Fish
Ingezaaid perkje | Sown bedding
Atol | Atoll
Lift  Elevator
Ingang  Enterance
Maanzaad  Poppy seed
Een hal  a Hall
Gang  Corridor
Brug

Trap
Hangbrug
Om overheen te lopen

Bridge

Stairs
Wire bridge
To walk over
<table>
<thead>
<tr>
<th>Koning</th>
<th>King</th>
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<tbody>
<tr>
<td>Joker</td>
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<tr>
<td>Sinterklaas</td>
<td>Sinterklaas (Bishop)</td>
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<td>Kerstman</td>
<td>Santa Claus</td>
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<tr>
<td>Mantel</td>
<td>Robe</td>
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</tbody>
</table>
Vuur | Fire
---|---
Fluweel | Velvet
Schilderij | Painting
Kleur | Color
Vlag
Paraplu

Flag
Umbrella
Results

Semantical
Phonological
Visual Errors
Errors

Errors
Visual Errors
Phonological
Semantical

Semantical  Phonological  Visual Errors  Errors
Language problems in MS?
- Sometimes apparent, sometimes not → in line with literature
- Patients with MS are not able to judge their language abilities.
  - Disease awareness
- Most errors are semantic errors.
Disability (EDSS) has no relation with scores on the Dutch Naming Test.
  - EDSS is removed from the regression model.

MOCA explains half of the scores on the Dutch Naming Test.
  - The subtests of the MOCA responsible for this relationship, are not language related subtests.

It appears that word-finding difficulties in MS are due to a combination of more general cognitive processing difficulties, combined with a decline in semantic memory and lexical access.
30% of the participants had naming impairment;
Poor awareness of naming impairment;
Most errors are semantic errors;
It remains unclear which cognitive/linguistic functions are involved in confrontational naming