Cognitive disorders as sources of variation in dialogues
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Multiple Sclerosis (MS)
- Neurodegenerative disorder including physiological, motor, cognitive and psychological impairments [1]

Cognitive impairment (CI) in up to 65% patients with MS: deficits in planning and decision making, working memory, attention and speed of processing [2]

- Planning strategy: longer time needed to plan the upcoming speech material

Comparison of healthy vs MS populations to get insight into cognitive constraints on speech planning

Interpersonal coordination
- Turn-taking is quick, but latencies in planning language production are longer [5]
- Question-answer (Q-A) pairs interesting for turn-taking coordination, because questions make a floor transfer relevant [6]
- Prosodic adaptation: similar prosodic patterns [7]

Research questions
1. Is turn-taking timing differently adjusted in MS patients with/without cognitive deficits?
2. Is prosodic adaptation related to cognitive deficits in MS?

Neurocognitive tests [3,4]
- Working memory: Letters and number sequencing task; SDMT
- Speed of processing: PASAT-3s
- Phonemic and Semantic fluency tests

Linguistic task
- Shipwreck scenario game [8]
- Dyads: MS vs. C / C vs. I (see table)
- Labeling of Interpausal Units and gaps in Q-A pairs (PRAAT)
- Adaptation by interlocutors

Statistics: Mixed models (p < .05)

RESULTS & DISCUSSION

Speakers’ Gaps

Interlocutors’ adaptation
- Strategies in interpersonal coordination depend on cognitive abilities: MS-CI vs. MS-NCI [β = 0.85, SD = 0.23, t = 3.6]; MS-NCI = C
- Longer gaps in Q-A -> more time preparation for MS-CI
- Wh-questions slower than polar questions -> greater cognitive complexity of response involved [9]
- Interlocutors adapt their gaps to MS-CI [β = 0.38, SD = 0.13 t = 2.8]

Neurocognitive scores

METHODS

Cognitive disorders as sources of variation in dialogues

INTRODUCTION

PARTICIPANTS

<table>
<thead>
<tr>
<th></th>
<th>MS-CI*</th>
<th>MS-NCI*</th>
<th>Controls (C)**</th>
<th>Interlocutors (I)**</th>
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<tr>
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<td>12</td>
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<tr>
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<td>36.9 (16.1)</td>
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<td>10F/2M</td>
<td>10F/2M</td>
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<td>EDSS</td>
<td>5 (1.18)</td>
<td>3.2 (1.25)</td>
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</tr>
</tbody>
</table>

*Relapsing remitting form; Exclusion criteria: therapy with antidepressant; dyslexia; dysarthria; history of alcohol or drug abuse; history of psychiatric disorder; hearing disorders; ** Matched in gender and education level with MS; *** Speech therapists or neuropsychologists;