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Target Area: Language/ Communication/ Speech > Semantic/ Word finding, Attention and Executive function > Cognitive, Memory, Activities of daily living > Instrumental

Jelcic, N., Cagnin, A., Meneghello, F., Turolla, A., Ermani, M. & Dam, M. et al. (2012), Effects of Lexical–Semantic Treatment on Memory in Early Alzheimer Disease: An Observer-Blinded Randomized Controlled Trial Neurorehabilitation and Neural Repair, 26(8), 949-956.

# PEDro score - 7/10

## Method/Results

### Design

- Study Design: RCT
- ➤ **Population:** n= 40 adults with Alzheimers Disease
- ➤ **Groups:** n=20 lexical—semantic stimulation (LSS) intervention, n=20 unstructured cognitive stimulation (UCS).
- > Setting: Laboratory

## Primary outcome measure/s:

- Mini-Mental State Examination (MMSE),
- Boston Naming Test (BNT)
- Verbal Naming Test (VNT)
- Phonemic and Semantic Fluency
- Story Recall
- Rey Auditory Verbal Learning (RAVL).

### Secondary outcome measure/s:

- Forward Digit Span Test -working memory
- ➤ Rey—Osterrieth Complex Figure (ROCF) and Clock Drawing Test- visual spatial memory
- Stroop Test, Attentive Matrices, Trail Making Test- attention and executive functions
- Instrumental activities of daily life (IADL)

#### Results:

At the end of 3 months of treatment, within-group and between-group comparisons showed that stimulation of lexical—semantic abilities improved global cognitive performance, lexical—semantic abilities, and verbal episodic memory.

LSS effects did not yield a clinical meaningful improvement of attention and executive functions.

## **Rehabilitation Program**

**Aim:** To investigate whether interventions that are targeted at stimulating lexical—semantic abilities and strengthening semantic representations may produce an improvement of verbal communication and semantic memory.

**Materials:** A simple computerized randomization technique was used to divide subjects into the 2 treatment groups. Focused lexical—semantic rehabilitation exercises were used.

#### Treatment Plan:

➤ **Duration:** Both the LCC and UCS conditions underwent 3 months of treatments; with the LSS group given a 6-month follow up.

### > Procedure:

All assessments were carried out by an experienced neuropsychologist (EM), blinded to the treatment group to which each patient was allocated.

The intervention protocol consisted of 2 weekly sessions of LSS or UCS exercises, lasting 1 hour each in the morning, over a period of 3 months.

#### Content:

The LSS protocol contained a range of lexical tasks. Exercises focused on the interpretation of written words, sentences, and stories and are divided into 8 main parts, e.g., semantic categories, syntagmatic and paradigmatic relationships, level of semantic affinity between words.