

**Investigating the effect of Semantic Feature Analysis on anomia in early
Alzheimer's disease :
Presentation of two cases studies**

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Alzheimer's disease is one of the most common neurodegenerative diseases. In the very beginning of the disease, a semantic memory breakdown is observed. The consequences of this deterioration include difficulties to retrieve words, their meaning and in more general terms, understanding language and being able to express themselves daily. The aim of our study is to evaluate the effectiveness of a method (the " Semantic Features Analysis " - SFA) aimed to reinforce semantic concepts in order to improve lexical retrieval capacities. Two participants, MS (87 years old, MMSE : 24/30) and MV (86 years old, MMSE : 20/30), were recruited for the study. Oral picture naming performance was assessed in the pre-intervention, post-intervention and maintenance phases using a naming task designed specifically for this study. A 16-session individualized management program was implemented with two 50-minutes sessions per week for 6 weeks. At each session, the participants were asked to complete a semantic feature analysis form for fifteen different items. Our results show a significant improvement in naming performance only for the MS participant. A generalization of this improvement to the untrained items but semantically related to the trained items and a maintenance of the benefits related to the management were also observed. In contrast, for the MV participant, performance did not change significantly. This lack of response could be explained in part by greater general cognitive and semantic decline. In conclusion, the treatment of anomia by the SFA made it possible to obtain significant evolutions in one of our participants with AD, by reinforcing the structure of the lexical-semantic network, in the condition of a not too deep semantic deterioration. Our first results provide some evidence-based recommendations to manage anomia in AD even if further research is still needed to support our preliminary findings.