

ASSOCIATIVE MEMORY EXERCISES AS A MEANS FOR ALZHEIMER'S TREATMENT: A CASE STUDY

*M.T. Garcia Campuzano*¹, **Z. Moussavi**^{1,2}

¹Biomedical Engineering Program, ²Psychiatry, University of Manitoba, Winnipeg, MB, Canada

People living with Alzheimer's disease experience a gradual decline in cognitive skills, especially in memory (Selkoe, 2002). However, through the frequent and regular use of memory exercises a cognitive improvement may be achieved. The intention of this paper is to report the results of an 8-weeks associative memory exercise regime applied to an Alzheimer's participant. Our hypothesis is that exercising the associative memory regularly and frequently will slow the Alzheimer's progression, and may even improve the mental and cognitive condition. To test our hypothesis, we used our recently designed associative memory exercises described in (Garcia et. al, 2012). An 86 years old female, diagnosed with Alzheimer's disease at relatively early stages, participated in this study (during 8 consecutive weeks, with 3 exercise sessions/week). At the beginning, at the end of the exercise regime and one month afterwards, the Wechsler Memory Scale questionnaire (WMS-III) was employed to assess her memory and mental state. Results from the memory exercises showed that the participant's performance improved over the eight weeks of trials. Moreover, 4 out of the 12 WMS-III subtests that were related to associative memory the most, presented score increments at the end of the exercise program (Logical Memory-I (0 to 7), Logical Memory-II-Recognition (15 to 20), Verbal Paired Associates-II-Recognition (13-16) and Family Pictures-II (4-11)). These results are as encouraging as the ones found in (Garcia et.al, 2012); they suggest that the designed memory exercises may be used as an effective tool to improve the cognitive state of individuals with Alzheimer's disease.