

## MOTOR PROCEDURAL LEARNING IN INDIVIDUALS WITH MILD AND MODERATE ALZHEIMER'S DISEASE COMPARED TO HEALTHY SUBJECTS

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**Introduction:** There are cognitive and motor impairments in individuals with Alzheimer's disease, which are related to their ability to learn the new procedures, skills and activities.

**Objectives and aims:** The aim of the study is to compare motor procedural learning in individuals with mild and moderate Alzheimer's disease with motor procedural learning in older subjects without dementia.

**Methods:** 32 individuals with mild and moderate Alzheimer's dementia (AD) (F.00.0, F.00.1, F.00.2) (MMSE > 15) (25 women, mean age  $76.8 \pm 6.41$  and 7 men, mean age  $79.1 \pm 5.21$ ), and 32 individuals without symptoms of dementia (healthy controls-HC) matched for sex, age and education level were examined. Motor procedural learning was assessed by the Pursuit Rotor Task (PRT). The time [ms] of keeping cursor within the moving round object-dot during every 4 trials was measured (after training session).

**Results:** The average time [ms] of keeping cursor within object in particular trials is as follows:

- AD: 857, 1035, 1060, 1098

- HC: 1014, 1068, 1316, 1681

Statistically significant difference was found in parameters from fourth trial between examined groups (U Manna-Whitney:  $Z = -1.962$ ;  $p = 0.05$ ).

**Conclusions:** It was found that mild and moderate AD patients are able to procedural learn motor task although they achieve worse scores than older persons without dementia.