



ΠΑΝΕΠΙΣΤΗΜΙΟ ΔΥΤΙΚΗΣ ΑΤΤΙΚΗΣ

ΣΧΟΛΗ ΕΠΙΣΤΗΜΩΝ ΥΓΕΙΑΣ ΚΑΙ ΠΡΟΝΟΙΑΣ

Τμήμα Φυσικοθεραπείας

PhD Thesis Summary

Title

**The effectiveness of imagery in the motor and cognitive state in mild
Alzheimer's disease**

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The purpose of the present study is to investigate the effectiveness of imagery on motor, cognitive and emotional ability of people with mild Alzheimer disease. Although imagery is a promising technique for neurological rehabilitation, little research has been done on Parkinson's disease, and there are no any randomized controlled trials on people with Alzheimer's disease. Also, imagery is an interesting field to study as it is affordable and does not create risk conditions for a fall or other accident. As it does not involve obvious movement, imagery does not cause pain and its use has no further complications in individuals. In addition, no special equipment is required to perform imagery. Therefore, the hypothesis of the present study is that imagery in combination with the exercise program will benefit people with mild Alzheimer disease, particularly in their balance, strength, functional status, cognitive ability, reduction of their depression and quality of their life.

For the purposes of the randomized controlled trial, one hundred and five people (105) with mild Alzheimer disease will be participated voluntarily. It will be a sample of convenience from a specific Structure in Attica (Alzheimer's Company of Athens). The sample will follow in the Structure a specific physiotherapy exercise program of 24 sessions by another physiotherapist, twice a week, lasting 45 minutes, for three months (12 weeks). The three groups of the study will be: (a) the experimental group (n = 35) who are going to follow imagery and the exercise physiotherapy program, (b) the exercise group (n = 35) (not imagery) and (c) the control group (n = 35), which will not perform either imagery or exercise program.

The inclusion criteria of the sample are:

- (a) To be diagnosed with mild Alzheimer disease
- (b) To understand the oral - written word and to execute orders
- (c) To be able to perform a moderate-intensity physical activity program twice a wee
- (d) men and women, aged from 65 to 95 years
- (e) to be ambulatory
- (f) to have no other accompanying acute health problems in the last month

The exclusion criteria of the sample are:

- (a) Severe form of Alzheimer disease
- (b) psychiatric problems
- (c) serious health problems affecting gait

The evaluation tests that will be performed at the beginning, in the middle (end of the 8th week) and at the end of the experimental process (12th week) between the three groups are:

- (a) Berg Balance Berg Scale
- (b) Multidirectional Reach Test
- (c) "Timed Up and Go" test
- (d) "Five times sit to stand" test
- (e) Walking while talking test
- (f) Geriatric Depression Scale
- (h) EQ-5D Health Status Questionnaire

The diagnosis will follow the DSM-IV and NINCDS / ADRDA criteria. The diagnostic tests that will be applied by a neuropsychologist once in the beginning for the inclusion of patients in the program are:

- (a) Modified Addenbrooke's Cognitive Examination-Revised (ACE-R)
- (b) A Frontal Assessment Battery
- (c) Short Mental Assessment Test
- (d) Clock Drawing Test
- (e) Short Anxiety Detection Questionnaire

Descriptive and inductive statistics will be performed with SPSS at the level of statistical significance $\alpha = 0.05$ with a power of 80%.