

1 | INTRODUCTION

Alzheimer's disease (AD) presents initially as progressive losses in one, or more than one, a cognitive domain such as memory, language, visual spatial skills, and executive functions. It develops into a brain disease that prevents the patient from performing his/her daily activities as previously, and behavioral problems begin to occur after a time.[1,2] Both incidence and prevalence increase with age. Thus, AD is considered a significant public health problem because

2 | BACKGROUND

AD is neurodegenerative, and its prevalence increases with age. AD is the most common reason for dementia syndrome.[16] The first and most damaged cognitive domain is the short term memory. In the further stages of the disease, deteriorations in language functions (word finding difficulties, paraphasia, and others), in place time person orientation and executive functions, losses in visual spatial skills, and behavioral disorders accompany the short term memory loss. Losses in short term memory stand out, although different disorders are seen in various cognitive domains as time progresses. Losses also occur in the long-term memory, and what's learned first is memorized last. Behavioral changes such as agitation, depression, delusions, and hallucinations occur in the intermediary stage of the dis ease. However, these symptoms may occur during any period of the disease.[17–19] Medical treatment of AD should be initiated as soon as possible, and supportive care should be provided as a supplement to medical treatment in the early stages. Because the stages of AD can progress rapidly, the aim of the t reatment should be to shorten the duration of the transition between AD stages. [20,21]

In addition to medical treatme nt, psychosocial procedures are used to ensure that patients regain the adaptation that is deteriorating along with disease p rogression. Psychosocial procedures enhance cognitive activiti es and are categorized as behavioral, emotional, perceptive, and cognition based procedures.[1,22] The most up to date and common cognitive and stimulation based treatment is cognitive stimulation therapy (CST), [1,16]

3.4.2 | Exclusion

Persons who participated in a similar program but did not participate in at least two CST sessions were illiterate and were diagnosed with other types of dementia.

3.5 | Sample size

The study population consisted of patients who had been diagnosed with AD and were monitored at the Neurology Polyclinic of Akdeniz University Hospital. Cohen's d (0.80),[34] power value (0.80), and type 1 margin of error (0.05) were used to calculate the sample of this study; the sample size was found to be 52 for both groups. It was decided that a total of 60 patients (30, each from both experimental and control groups) would be included.

3.6 | Randomization

In total, 78 patients fitting the study criteria were selected after examining the files of 118 patients being monitored in the polyclinic. Numbers ranging from 1 and 78 were assigned to the patients who were randomly divided into experimental and control groups on an electronic environment, each group having 60 patients. Individuals were appointed to the experimental and control groups through simple randomization using the program. Files of Alzheimer type dementia patients were obtained from the neurology polyclinic and separated by the researcher considering the inclusion and exclusion criteria (Figure 2).

3.7 | Intervention

The experimental group was treated using RAM based CST, and routine treatment (monthly polyclinic monitoring) was provided to the control group.

3.8 | RAM based CST was developed in three stages

3.8.2 | Second stage

In the second stage of the study, 78 patients selected in accordance with the inclusion and exclusion criteria were invited to participate. Patients and their relatives were informed about

10 minutes, respectively. The therapy was conducted for 7 weeks (two sessions per week for both groups). Patients were trans-

TABLE 3 Comparing patients' mean Standardized Mini Mental State Examination (SMMSE) scores with the pretest and posttest results

	Experimental group (n = 30)	Control group (n = 30)		
SMMSE	Median (25% 75%)	Median (25% 75%)	U	P value
Baseline	17.60 (14.50 20.00)	16.50 (13.50 19.00)	0.615	.80
Post intervention	20.00 (17.50 23.60)	14.50 (11.00 17.00)	0.024	.00*
Test de eri	t = 2.418	Z = 0.418		
P value	.001*	.04		

Abbreviations: t, t test; U, Mann Whitney U; Z, Wilcoxon analysis, df (degree of freedom): 2.
*P < .05.

4.2 | Findings related to patients ' coping and adaptation levels

In the experimental group, dimensions of troubleshooting and focusing, making physical decisions, attention processing, systematizing, learning, and establishing relationships were found to be significantly better with the measurements performed after the application, and the difference was found to be statistically significant (P < .05). Regarding the control group, no difference was found before and after the application (P > .05). In the experimental group, dimensions of troubleshooting and focusing, making physical decisions, attention processing, systematizing, learning, and establishing relationships were found to be better than those of the control group after the application, and the difference was found to be statistically significant (P < .05) (Table 4).

TABLE 4 Comparing patients' total Coping and Adaptation Processing Scale (CAPS) scores and mean subdimension scores with the pretest and posttest results

	Experimental group (n = 30)	Control group (n = 30)		
CAPS subdimensions	Median (25% 75%)	Median (25% 75%)	U	P value
Troubleshooting and focusing				
Baseline	15.30 (13.20 17.50)	15.00 (13.00 17.00)	0.754	.12
Post intervention	26.00 (28.00 24.50)	15.00 (13.50 17.00)	23.52	.00
Test value*	t = 0.924	Z = 2.469		
P value	.003	.38		
Making physical decisions				
Baseline	23.00 (19.00 28.00)	24.00 (20.50 28.00)	0.179	.34
Post intervention	30.00 (27.00 33.50)	23.00 (15.50 31.50)	29.753	.00
Test value*	t = 0.007	Z = 2.634		
P value	.01	.47		
Attention processing				
Baseline	15.00 (12.50 18.50)	15.50 (10.50 20.50)	0.237	.09
Post intervention	25.00 (22.50 28.50)	14.00 (12.50 16.00)	5.86	.022
Test value*	t = 6.744	Z = 3.178		
P value	.00	.43		
Systematizing				
Baseline	11.00 (7.50 14.50)	11.30 (8.50 14.50)	0.280	.59
Post intervention	17.00 (16335.9(results)]TJ /F6 1 Tf 7.4718 0 0 7.4718 51		20.06 (8.50	
20.00)	15.30 (13.20	176 213	3228.64(16335.9(results)1 Tf .40213 0 TD (940).9(82 f .3339 0 TD64ervention)-739	

4.3 |

coping behaviors and thus enhances their adaptations to their disease[46] Patients' coping and adaptation levels were evaluated using CAPS in our study. However, no study determining the coping and adaptation levels of dementia patients who received RAM based CST with CAPS was found in the results of the literature review. Therefore, outcomes of the study that evaluated the coping levels of patients with different measurement tools following CST application, and the outcomes of the study that evaluated the effect of CST on different patient groups' coping and adaptation levels, were discussed. Dementia patients' ability to cope with the disease was examined before and after the application of CST, and the coping skills of patients who received CST were found to be better than those of patients who did not receive CST.[47] Navarro et al[48] applied CST to Alzheimer's patients and found that patients' ability to cope with the disease was enhanced.[23] report in their study, in which they examined the effect of CST on certain parameters of dementia patients using pretest and posttest design, that CST improves patients' ability to cope with the disease.

These findings indicate that CST enhances patients' ability to

The CST based on RAM strengthened the cognition of Alzheimer's disease patients. This reduced disease and care expenses and made an indirect contribution to the national economy. The CST based on RAM is a new nursing practice that can be used by practitioner nurses to improve the cognition of Alzheimer 's disease patients and ensure their compliance with the disease treatment. In addition, the CST was applied based on a nursing theory and introduced to nursing as a therapy model that can be applied based on a theory.

7 | LIMITATIONS

This study has a sample limitation because it was conducted with patients applying to a health institution. The outcomes of the study cannot be generalized because external validity could not be ensured, but these outcomes may ultimately contribute to the generalization. Also, blending was not performed because the pretest and posttest data were collected and RAM based CST was applied by the same person; this was also considered a limitation of the study. The preferred statistical tests in the study are among the limitations of the study.

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