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ORIGINAL RESEARCH **E-ISSN:**

COGNITIVE STIMULATION THERAPY ON ELDERLY WITH DEMENTIA IN PANTI WERDHA PANDAAN, PASURUAN

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ABSTRACT

Background: Everyone will experience an aging process that lead to the vary emotionals feeling and conditions. Periods from birth to death including to sequences of unpredictable life events that relate to physical maturation and carrying out age-related roles in which need preparation to bear the new role and the new situation (Little William, 2014).
Objective: The purpose of this study was to examine the effect of cognitive stimulation therapy on Elderly with Dementia in Panti Werdha Pandaan, Pasuruan.
Methods: A quasi-experimental design was used in this study. There were two groups, experimental and control group. The experimental group received Cognitive Stimulation Therapy within 2 weeks. Before and after the intervention, both group measured their cognitive functions by using the Mini Mental Status Examination (MMSE). Researcher assissted by four volunteers to do the pre and post test. Data entry and statistical analysis was performed using SPSS version 18. The significant level of statistical tests was set at 0.05. descriptive and t-test statistics were used. Kolmogorov-Smirnov was used to test for normal distribution. Paired t-tests assessed the differences in cognitive ability mean scores at pre-test and post-test within the experimental and control groups. Independent t-test assessed the difference in cognitive ability mean scores from pre-test to post-test between experimental and control groups.
Results: The results showed that the experimental group post test scores are much higher than pre-test ($p = 0.000$). it means an increase in cognitive function after being given CST. In control group there are differences in pre-test and post-test scores bit the differences is not significant ($p = 0.547$).
Conclusion: This study focuses on the administration of CST in elderly with mild to moderate dementia. The hope is to provide CST therapy then there will be an increase in cognitive function.

Key words: Cognitive stimulation therapy, dementia, elderly.

INTRODUCTION

Everyone will experience an aging process that lead to the vary emotionals feeling and conditions. Periods from birth to death including to sequences of unpredictable life events that relate to physical maturation and carrying out age-related roles in which need preparation to bear the new role and the new situation (Little William, 2014). The myth that is often seen that the elderly is a senile period caused by brain cell damage. when in fact many older people are still healthy, their thinking power is still clear because there are actually many ways to adjust to changes in their memory (Wahyudi, 2008).

Health problems on elderly referred to as geriatric syndromes that are often complained of by themselves or their families: Immobility, Instability (easy to fall), Incontinence, Intellectual impairment (intellectual impairment/dementia), Infection, Impairment of the senses (hearing, vision and smell), Isolation

(depression), Impecuniosity, Iatrogenicity (suffering from a disease effect of drugs), Insomnia, Immunodeficiency, Impotence, Impaction, and Inanition (Safitri, 2018).

Dementia is a symptom of decrease in memory, thinking, behavior and ability (WHO, 2016). Around 46 million elderly people in the world suffer from dementia, including in Asia with 22 million people.

Dementia affects each elderly in different way, depending on the impact of the disease and the person's abilities before becoming ill. The signs and symptoms linked to dementia can be understood in three stages: Early stage, Middle stage, and Late stage (WHO, 2016). Dementia can affect the daily life of the elderly both in the family environment, employment and society, making the quality of life declining (Darmojo, 2009). Therefore, they need right care and therapy. How to deal with dementia can be done in two ways, namely with drugs and therapy without using drugs. drug therapy uses Cholinesterase inhibitors. In addition, relaxation therapy, such as music, pets, art or massage therapy, can also help stimulate mood and behavior (Tania Saftri, 2019). Cognitive stimulation therapy is an organized group therapy program developed for people with cognitive impairment (WHO, 2017). This therapy involving dementia sufferers in a series of activities and group discussions designed to improve cognitive and social functions. It is the right therapy cause the application of structured approach that stimulate and involve people to recall their memories (John E Morley & Dulce M, 2014). Cognitive stimulation has significant improvement to the person with dementia that measured by the Mini Mental Status Examination (MMSE) (Spector. et all, 2003). In Indonesia CST is a group activity carried out by means of activities by nurses in the form of drawing, singing, playing puzzles, guessing animal sounds and light exercise (Spector et al., 2003).

Although this cognitive stimulation therapy has proven effective on previous studies, it needs to apply to elderly who stay in nursing home in order to maintain their cognitive functions. Therefore, researchers presented cognitive stimulation therapy on elderly people with dementia in Panti Werdha Pandaan Pasuruan.

METHODS

Study Design

A quasi-experimental design was used in this study. There were two groups, experimental and control group. The experimental group received Cognitive Stimulation Therapy within 2 weeks.

Setting

This research was conducted in May until June 2019 at Panti Werdha Pandaan Pasuruan.

Research Subject

The population of this study was all elderly who live at Panti Werdha Pandaan Pasuruan. There were 50 participants that divided to the groups. The simple random sampling technique was used with the following inclusion criteria: 1) Aged 60 years and over, 2) Mild or moderate dementia (Indonesian version of MMSE: scores of 20-25 mild cognitive damage, and 10-19 moderate cognitive damage), 3) Can write and speak Indonesian, 4) There are no mobility barriers that interfere with respondents, and 5) No hearing or visual damage that will affect the respondent.

Instruments

The measuring instrument used in this study was demographic questionnaire includes age, sex, education, previous occupation; Mini Mental Status Examination (MMSE), Indonesian Version

(Berliany et al., 2018). This instrument measure cognitive abilities consisting of 30 item and is divided into dimensions of orientation (10 item), registration (3 item), attention and calculation (5 item), recall (3 item) and language (9 item). In this study the level of elderly dementia that will be studied is mild (score 20-25), moderate (score 10-20). The manual of Cognitive Stimulation Therapy (Berliany et al., 2018). This therapy consists of 14 sessions in which three-45 minutes sessions per days for 2 weeks.

Data Analysis

Data entry and statistical analysis was performed using SPSS version 18. The significant level of statistical tests was set at 0.05. descriptive and t-test statistics were used. Kolmogorov-Smirnov was used to test for normal distribution. Paired t-tests assessed the differences in cognitive ability mean scores at pre-test and post-test within the experimental and control groups. Independent t-test assessed the difference in cognitive ability mean scores from pre-test to post-test between experimental and control groups.

Ethical Consideration

In order to ensure ethical consideration, this research was approved from the head of Panti Werdha Pandaan Pasuruan, and informed consents were signed by all participants. All the privacy and identities of participants would be kept confidential and accessible only by the researchers.

RESULTS

Demographic Data of Respondents

Table 1. Distribution of Frequency of Respondents in the Panti Werdha Pandaan, Pasuruan at May until June 2019 (n = 50).

Variable	Experimental group		Control group	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Age (years)				
45 – 59	0	0	0	0
60 – 74	15	60	16	64
75 – 90	10	40	9	36
Gender				
Male	10	40	9	36
Female	15	60	16	64
Educational Level				
No school	4	16	6	24
Elementary	11	44	10	40
Junior school	1	4	6	24
Senior high school	8	32	2	8
Undergraduate	1	4	1	4
Job Before				
No job	5	20	9	36
Employee	10	40	6	24
Entrepreneur	10	40	10	40

Comparison between Experimental Group and Control Group

Table 2. Comparison between Experiment and Control Group in the Panti Werdha Pandaan, Pasuruan at May until June, 2019 (n = 50).

Variable	Experimental group (n-25)	Control group (n=25)	t-test	*p*
Pre-test	20.76 ± 5.29	19.96 ± 4.31	0.59	.560
Post-test	24.44 ± 4.30	20.20 ± 4.77	3.30	.002

Based on the table 2, it found that the pretest scores in the experimental group were higher than in the control group, but the difference was not significant (p = 0.560). This means that cognitive function in the experimental group with the control group is not too different. But after the post test was done the score in the experimental group was much higher compared to the control group (0.002) this means there is in increase cognitive function significantly in the experimental group rather than control group.

Comparison of Pre-Test and Post-Test between Each Groups

Table 3. Comparison of Pre-Test and Post-Test between Each Groups in the Panti Werdha Pandaan, Pasuruan at May until June 2019 (n = 50).

	Pre-test	Post-test	t-test	*p*
Experimental group	20.76 ± 5.29	24.44 ± 4.30	-4.97	.000
Control group	19.96 ± 4.31	20.20 ± 4.77	-0.61	.547

The table 3 found that the experimental group post test scores are much higher than pretest (0.000). it means an increase in cognitive function after being given CST. And the increase very significant. In control group there are differences in pre-test and post-test scores bit the differences is not significant ($p = 0.547$). it means the control group an increase in cognitive function but not significant. There is a significant difference in the improvement of cognitive function between groups given CST namely the experimental group and not given CST, namely in the control group.

DISCUSSION

Elderly with mild dementia who have symptoms, among others forgetfulness, losing track of the time, becoming lost in familiar places. As progress on middle stage, the signs and symptoms become clearer and more restricting, including to Becoming forgetful of recent event and person's name, becoming lost at home, having increasing difficulty with communication. After being given CST it appeared to have increased cognitive function. CST is a group therapy that involves participants in a series of activities and discussions aimed at improving cognitive function. This is in accordance with previous studies that mention the success of cognitive stimulation therapy (Komalasari, 2014). This CST is an alternative therapy besides pharmacological therapy that is easy to use, safe and does not endanger the elderly. So, this CST is a non-pharmacological therapy for treating elderly with mild to moderate dementia because it has been shown to improve cognitive function. Because in the CST activities include playing guess words to sharpen memory, playing music to improve one's mood, playing guess words and everything is done in groups so that it can stimulate participants to increase socialization as well (John E Morley & Dulce M, 2014) & (Tania Safitri, 2019). Besides sharing pleasant experiences and sharing memories that can increase dopamine production and increase neuronal activity that expands brain tissue, this can improve cognitive abilities and communication skills (Achim et al., 2006).

The results showed there were differences in pre and post test scores. There was an increase in MMSE scores after CST. In research CST therapy consists of 14 sessions conducted every 3 days for 2 weeks. In other studies, prove that CST in addition to improving cognitive function also determines the quality of life (Spector, et al., 2003). Benefits experienced by the alderly from giving CST include stimulating parts of the brain, activating the mind and cognitive, training skills that are not usd anymore and motivate the elderly to make an effort in the activity (Spector, et al., 2003).

The obstacle in this research is that the CST sessions are actually designed for participants who are able to read and write, but in this study, there were 3 participants who were unable read and write. So, the researcher must also read the instructions on the MMSE form to the respondent and then the respondent submits the answer verbally. Another limitation is that this study did not examine other factors that might interact with cognitive function in the elderly with dementia.

CONCLUSION

This study focuses on the administration of CST in elderly with mild to moderate dementia. The hope is to provide CST therapy then there will be an increase in cognitive function. Further research involving a greater number of elderly and different places needs to be conducted before the findings of the effectiveness of CST can be generalized to the people of Indonesia in general.

SUGGESTION

The author hopes that going forward, nursing home wandering can use CST therapy as part of the services provided to the elderly with the aim of caring for elderly with mild to moderate. And for further research is expected to add more variables.

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