



The Effect Of Brain Gym With The Level Of Stress On Elders In Panti Sosial Lanjut Usia Potroyudan Jepara

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ABSTRACT

Along with the increasing number of elderly people in Indonesia, it will cause quite complex problems, both physical and psychosocial problems. The most common psychosocial problem in the elderly is stress. Efforts to overcome the problem of stress in the elderly are brain exercise therapy. This study aims to determine the effect of brain exercise therapy on stress levels in the elderly. The research design used by the researcher was Quasy Experiment with pre-post test design. This study used a sample of 30 respondents. The sampling technique used is purposive sampling. Based on the analysis test using the Wilcoxon Signed Rank Test, it shows a p-value of 0,000, so there is an effect of brain exercise therapy on stress levels in the elderly. This study provides general information related to the management of stress disorders in the elderly using brain exercise therapy. In addition, the findings from this study are expected to provide advice for nursing service providers, especially in nursing homes. local area so that they can carry out brain exercise therapy as a program to improve the health of the elderly.

Keywords: Brain Exercise, Elderly, Stress

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INTRODUCTION

The process of aging is a natural process that occurs in the elderly, although it is a natural process, it still causes problems both physically, mentally and socially ¹. Elderly who in normal circumstances should be able to accept the declining condition by feeling satisfied with their life so far, but if they cannot accept their life, they will enter a state of hopelessness and create a condition of excessive stress. Residential and environment can be a factor in the emergence of stress in the elderly. Elderly who live in the orphanage are sometimes often bored with daily activities, especially there are problems with other residents of the orphanage, competition and jealousy and differences in physical conditions, this results in the elderly being irritable, having trouble sleeping and withdrawing, these are early symptoms of the onset of stress. ²

Excessive stress in the elderly if left untreated can cause negative effects such as high blood pressure, changes in appetite, mood swings, irritability then goes into a stage of continuing depression, memory problems, difficulty concentrating, sickness, sleep disturbances and even withdrawal. Currently, management that can be done to deal with stress is brain gym ³. Brain exercise therapy will make the brain work or active, by stimulating the left and right brain (lateral dimension), lightening or relaxing the back of the brain and the front of the brain (focusing dimension). Brain exercise is a number of simple movements that can balance every part of the brain, can pull out the concentration level of the brain, and also as a way out for the blocked part of the brain to function optimally. Light movements with play through hand and foot exercise can provide stimulation or stimulus to the brain. ⁴. The results of a study conducted by Sari (2015) showed that brain exercise had a significant effect on the depression level in the elderly. Brain exercise can relax the brain so that emotional stress can be reduced and the mind is clearer because it can stimulate and activate the brain towards brain fitness, people become more enthusiastic, and can reduce physical complaints. ⁵

Based on a preliminary study at the Potroyudan Jepara Elderly Social Service Home on May 21, 2019, there were 40 elderly people aged over 60 years, the majority of whom experienced stress. 15 of them experienced severe stress due to their weaker physical condition so that they lacked confidence in carrying out their daily activities. 25 elderly experienced moderate stress. From the above problems, the researcher wanted to know the effect of brain exercise therapy on the stress level of the elderly in the Potroyudan Elderly Social Home, Jepara. Specific objectives in this study were to describe the stress level of the elderly before and after brain exercise therapy and to analyze the effect of brain exercise on the stress level of the elderly.

Urgency of Research: The current condition of the Covid 19 pandemic has led to negative psychological conditions in the elderly, including increased stress. Health protocols that are stricter than usual, elderly people who have limited social activities, are not allowed to leave the orphanage, there are no visits from other people and the lack of activities causes this to happen. Excessive stress can reduce the quality of life and immune system of the elderly, this is not good considering that the elderly

are a high-risk group due to COVID-19. This research is expected to be able to provide additional interventions for the health of the elderly that are included in the routine of daily activities so that the elderly can manage stress well .

METHODS

This study used an experimental Quasy design with a One group pre-test-posttest design with control group design. The population in this study were the elderly who live in the Potroyudan Jepara elderly social institution with a total of 30 elderly. The sampling technique used total sampling, namely the researcher took the entire population with inclusion criteria, namely: 1) Elderly over 60 years; 2) Elderly living in Potroyudan Elderly Social Home, Jepara 3) Elderly who are willing or agree to become respondents; The exclusion criteria are: 1) Elderly who has decreased awareness 2) Elderly who is totally dependent. From the inclusion and exclusion criteria, a suitable sample of 30 respondents was obtained. In this study, the researchers provided brain exercise therapy with three simple movements, each movement carried out 2 x 8 counts every day for 14 days of therapy. Before being given therapy, the researcher first took the pre-test data by using a modified stress questionnaire using the Kessler Psychological Distress Scale (KPDS), after 14 days of therapy, then a post-test was carried out again with the same questionnaire. Test data analysis using the Wilcoxon sign Rank test

RESULTS

Tabel 1

The frequency distribution of respondents based on stress levels in the elderly before being given brain exercise

Variabel Penelitian	Level of Stress							
	Normal		Ringan		Berat		Total	
	f	%	f	%	f	%	f	%
Responden	11	36.7	15	50.0	4	13.3	30	100

The table above shows that the stress level of respondents in the elderly before being given brain exercise is mostly mild as many as 15 people (50%)

Tabel 2

The frequency distribution of respondents based on the level of stress after being given brain exercise

Variabel penelitian	Level of Stress							
	Normal		Ringan		Berat		Total	
	f	%	f	%	F	%	f	%
Responden	25	83.3	5	16.7	0	0	30	100

The table above shows that the stress level of respondents in the elderly after being given brain exercise mostly became normal, namely as many as 25 elderly (83.3%)

Tabel 3

The frequency distribution is based on differences in stress levels in the elderly before and after doing brain exercise

Kelompok Intervensi	Mean	SD	Selisih Mean	p value
Sebelum	1.77	0.679	0.6	0,00
Sesudah	1.17	0,379		

Based on the Wilcoxon test, the p value was obtained at 0.000 (<0.05). This shows a difference between stress levels in the elderly before and after doing brain exercise. This difference can be seen from the results of univariate analysis where the stress level of the elderly before brain exercise is mostly mild stress and after doing brain exercise most of the stress levels in normal respondents

DISCUSSION

The results showed that based on the Wilcoxon Test the p value was 0.000 (<0.05). This shows a difference between stress levels in the elderly before and after doing brain exercise. This difference can be seen from the results of univariate analysis where the stress level of the elderly before brain exercise is mostly in the mild stress category of 30 people (50%) and after doing brain exercise most of the stress levels in normal respondents are 25 people (83.3%). The results of this study are in line with what Guslinda (2013) states that there are differences in stress levels with low self-esteem in the elderly after being given brain exercise therapy and cognitive therapy where the elderly who are given the therapy experience a decrease in stress levels. ⁶ From the results of the study, most of the elderly said that they often felt anxious and anxious about things such as the condition of their body health, conflict among residents of the orphanage and who were especially anxious and anxious about the current COVID 19 disease pandemic. The stress symptom experienced by the elderly is because the elderly still have high

motivation and willingness to improve their health and the need for the elderly to socialize or gather with friends and the desire for recreation outside the guesthouse but due to the Covid 19 pandemic conditions, the elderly are limited in their interaction and recreation outside the guesthouse. Besides that, the threat of diseases that easily attack the elderly who have a high risk also creates stress for them.

Stress is a form of mood disorder with symptoms of dysfunction in the affective, emotional, thought and general activities ⁷. Stress can occur at all ages, especially in the elderly, where the elderly are a group that is vulnerable to physical and psychosocial changes and stress. is a health problem most commonly found in the elderly. The majority of elderly people experience a general mental disorder characterized by a depressed mood, loss of pleasure or interest, feelings of guilt or low self-esteem, eating or sleeping disorders, lack of energy and low concentration ⁸.

A person who has entered at an advanced age is strongly encouraged to do positive activities and do simple physical exercises. In addition to maintaining physical health, physical exercise can also prevent psychological problems in the elderly, especially stress. This is supported by Praghlapati (2019) that by practicing regular physical activities can prevent stress and improve the quality of life of the elderly, one of the physical activities that can be done to prevent stress is brain gym ⁹.

Brain exercise consists of simple body movements that can provide balance to both sides of the brain simultaneously. Brain exercise is able to make blood flow to the brain higher so that the supply of nutrients is better, so that by applying this brain exercise regularly the brain will get more of the nutritional supply the brain needs to work optimally. The results of several studies show that regular physical exercise can maintain, optimize and improve brain function ¹⁰. Brain exercise therapy will make the brain work or active, make it healthy as a whole by stimulating the left and right brain (lateral dimension), lighten or relax the back of the brain and the front of the brain (focusing dimension), stimulate the system associated with feelings / emotions, namely the brain middle (limbic) and cerebellum (concentration dimension).¹¹ In addition, brain exercise can also improve memory function, cognitive function and orientation optimally. With the increase in cognitive function of the elderly, their ability to perceive something, learn, solve problems and control emotions will be better, so as to reduce stress levels in the elderly. ⁶

Brain exercise movements are also able to increase the hormones serotonin, endorphins and melatonin. These three hormones can provide a feeling of calm, comfort, and relaxation so that stress levels can be lowered. Serotonin can provide a boost to the limbic system to increase feelings of comfort, happiness, satisfaction, good appetite, psychomotor balance and a suitable sex drive. Endorphins are useful for suppressing pain signals that enter the nervous system by activating the pain control system and providing a relaxing effect. Meanwhile, melatonin can relax muscles, reduce tension and anxiety, and provide a comfortable feeling ⁵. In the researcher Lamuhammad (2015), brain exercise (Brain Gym) is aimed at relaxing or the dimension of concentration, stimulating or lateral dimensions and lightening or focusing dimensions. The concentration dimension can increase blood flow to the brain, increase oxygen reception so that it can eliminate negative thoughts, envy, jealousy, and others that can trigger

stress. The lateral dimension will stimulate the coordination of the two hemispheres, namely the left and right, improve breathing, stamina, release tension, reduce fatigue, and so on. The focusing dimension to help remove focus barriers from the brain corrects inattention, lack of concentration, and so on. Each dimension has a specific task so that the exercise movements that are carried out can vary. With the Brain Gym movement, it can activate the neocortex and parasympathetic nerves to reduce the increase in adrenal hormone in the body which can relieve psychological and physical tension. So that the soul and body become relaxed and balanced. ²

CONCLUSION

The results of this study indicate that the results of the Bivariate analysis statistically show the effect of brain exercise therapy on reducing stress levels in the elderly in the Potroyudan elderly home in Jepara, so that it is proven that brain exercise therapy if given to the elderly every day with a duration of about 30 minutes in 2 x 8 counts with 3 simple movements for 14 days is useful in reducing stress levels in the elderly. This benefit is illustrated by the reduction in stress symptoms experienced by the elderly such as easy anxiety for no apparent reason, feeling heavy doing something and feeling hopeless. Thus brain exercise therapy can be used as a complementary therapy in correcting psychological problems in the elderly.

Suggestions in this study are expected that health workers can provide health education about the use of complementary brain exercise therapy to improve mental health in the elderly, socialize brain exercise therapy to improve the quality of life of the elderly and increase the support and commitment of health workers in combining pharmacological and non-pharmacological therapies such as brain exercise therapy. in the daily elderly health program .

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