

IMPLEMENTATION OF BRAIN EXERCISES ON POWER CHANGES REMEMBER THE ELDERLY AT IRYOU HOUJIN FUKUJUKAI NISHIHARA KEIAIEN JAPAN

Dewi Yulia Agustina, Setianingsih*

Sekolah Tinggi Ilmu Kesehatan Kendal, Jl. Laut No.31, Ngilir, Kendal, Central Java 51311, Indonesia

*setianingsih@stikeskendal.ac.id

ABSTRACT

The process from adulthood to old age causes cognitive impairment to the memory abilities of the elderly. As an effort to overcome the decline in cognitive function in the elderly, nursing staff can do this by carrying out non-pharmacological therapy, namely brain exercises. Brain exercises are a number of simple movements that can balance each part of the brain, can draw out the level of brain concentration and provide some solutions for blocked parts of the brain so they can function optimally. Improving memory function can prevent a complete decline in the intellectual, cognitive and emotional functions of the elderly. This research aims to find out whether there are brain exercises on changes in memory in the elderly. The method used is a case study which involves several stages of the nursing care process starting from assessment, diagnosis, intervention, implementation and nursing evaluation with a focus on nursing diagnoses, namely memory disorders. After giving brain exercise training for 3 x 15 minutes, it was proven to have an effect on changes in memory. The implementation of brain exercises has been proven to be effective in increasing changes in memory. Brain exercises can improve language skills and memory, including the right brain and left brain, to the cerebrum, the brain flows to the cerebrum and affects cognitive function.

Keywords: brain exercise; elderly; memory

INTRODUCTION

Elderly is a term for individuals who have entered the late adult period or old age. This period is the closing period for a person's life span, where there has been gradual physical and psychological decline. The number of elderly people in Indonesia in 2006 was approximately 19 million, with a life expectancy of 66.2 years. In 2010 it was estimated at 23.9 million (9.77%), with a life expectancy of 67.4 years and in 2020 it was estimated at 28.8 million (11.34%), with a life expectancy of 71.1 years. Based on this number, the elderly population in Indonesia is the fourth largest after China, India and the elderly in Japan (Abdillah & Ayu, 2018). The aging process is a life cycle marked by stages of decline in the function of various body organs, which is characterized by the body's increasing vulnerability to various diseases that can cause death, for example in the cardiovascular and blood vessel systems, respiratory, digestive, endocrine and so on. This is because as age increases, changes occur in the structure and function of cells, tissues and organ systems. These changes generally affect the deterioration of physical and psychological health which will ultimately affect the economy and social life of the elderly. So in general it will affect the activity of daily living. Health problems include decline and weakness in the elderly, namely physical, cognitive, spiritual and psychosocial changes. One of the cognitive changes that occurs in the elderly is changes in memory or recall. In the elderly, memory is one of the cognitive functions that often declines first. Cognitive damage in the elderly in the form of memory loss is usually called dementia. Dementia is a disorder of memory function or memory and thinking power that is slowly but getting worse (Abdillah & Ayu, 2018).

Dementia is a disorder that attacks parts of the brain. A person with dementia has impaired intellectual function which causes disruption in daily activities and relationships with those around them. Dementia sufferers also lose the ability to solve problems, control emotions, and can even experience personality changes and behavioral problems such as irritability and hallucinations. Based on a number of research results, data has been obtained that dementia often occurs in elderly people who are approximately 60 years old. Dementia can be divided into two categories, namely: Pre-Senior Dementia (60 years), and Senile Dementia (60 years and over). Around 56.8% of elderly people experience dementia in the form of Alzheimer's Dementia (4% experienced by elderly people aged 75 years, 16% at the age of 85 years, and 32% at the age of 90 years). To date, it is estimated that around 30 million people in the world experience dementia for various reasons. Stimulation to increase brain capacity with pharmacological therapy, namely with certain drugs and non-pharmacological therapy, namely in the form of exercises or games whose procedures require concentration, orientation, memory and visual attention, such as crossword puzzles, puzzles and brain exercises. Brain exercise (brain gym) is one of the preventive stimulation measures to optimize, stimulate brain function to become increasingly relevant in the elderly, and improve blood and oxygen flow to the brain (Abdillah & Ayu, 2018).

Brain gym is a series of simple movements that are fun and are used to improve learning abilities by using the whole brain. Brain exercise in the form of Edu-K (Educational Kinesthetic) was first introduced by Dennison. Brain Gym was originally only intended to train children who experienced hyperactivity disorders, brain damage, difficulty concentrating and depression. However, in its development, everyone, both children and adults, can use it for various purposes. Brain exercises are useful for training the brain. Brain training will make the brain work or be active. The brain of someone who is active (likes to think) will be healthier overall than someone who doesn't or rarely uses their brain. Brain exercise is also very practical, because it can be done anywhere, anytime, and by anyone. The appropriate portion of exercise is around 10-15 minutes, 2-3 times a day. These brain exercise exercises are the essence of Educational Kinesiology, which means the science of human body movement. Based on research conducted by Doewes (2009), the combination of aerobic exercise and brain exercise in old age is not only good for physical fitness but can also improve brain health. Participating in a regular exercise program in old age is very effective in reducing and preventing problems related to premature aging. Some scientific discoveries are very important because they can provide empirical data related to physical health and neurodegeneration. Thus, the role of health as a protection and enhancement of cognitive function and the integrity of the nervous system in old age appears to have a strong biological basis. Several studies report that the benefits of aerobic exercise and brain exercise can improve physical and brain health. The aim of this research is to determine the effect of brain exercise on memory changes in the elderly in the Iryou Houjin Fukujukai Nishihara Keiaien Nursing Home in Japan (Abdillah & Ayu, 2018) .

METHOD

This case research was conducted on Mrs. Ng who is 92 years old with the patient complaining of difficulty remembering the names of people closest to her, nurses, family and difficulty remembering the date, month and year, using a nursing care approach process which consists of 5 stages, namely assessment, nursing diagnosis, nursing intervention, implementation, and evaluation

RESULTS AND DISCUSSION

Based on student practice carried out at Iryou Houjin Fukujukai Nishihara Keiaien Japan for 1 year, it was found that 75% of the elderly population with memory problems were found in the elderly population at Iryou Houjin Fukujukai Nishihara Keiaien Japan. The results obtained after carrying out the assessment were continued by determining nursing diagnoses where the author Determine the nursing diagnosis of memory disorders related to the aging process in Mrs. Ng where this requires treatment or intervention to prevent memory disorders.

Based on the case study of nursing care for the elderly, the researcher will discuss the effectiveness of dual tasks training therapy walking with pyramid A sticks in maintaining body balance due to physical mobility disorders in Mrs.T which is the first priority that the author gets in the results of case management at the beginning of 2 February 2024 by going through several stages of the nursing process including assessment, nursing diagnosis, nursing intervention, nursing implementation, and nursing evaluation.

Nursing Diagnosis

In this case study the author raised a diagnosis of memory disorders related to the aging process. Nursing Intervention Nursing interventions are all forms of therapy carried out by nurses based on clinical knowledge and judgment to achieve improvement, prevention, recovery of the health of individual clients, families and communities. Some of what is stated in Article 30 of Law Number 38 of 2014 concerning Nursing is that in carrying out their duties as providers of nursing care, nurses have the authority to plan and carry out nursing actions, make referrals, provide emergency measures, provide consultations, collaborate, provide counseling and counseling, administering medication according to a doctor's prescription or over-the-counter and over-the-counter medication, managing cases and managing complementary and alternative interventions (PPNI, 2018). Nursing interventions or nursing plans made based on nursing diagnoses of memory disorders include observation: identifying memory problems experienced and monitoring behavior and memory changes during therapy, therapeutic: planning teaching methods according to the patient's abilities, stimulating memory by repeating the last thought spoken, error correction orientation, facilitation of learning tasks (e.g., remembering verbal information and images), facilitation of recalling past experiences, facilitation of concentration abilities (e.g., playing pair cards), stimulation of using memory on events that have just occurred, education: explain the purpose and procedure of the exercise and teach appropriate memory techniques (e.g., visual imagery, memory games, memory cues, association techniques, making lists, computers, nameplates, collaboration: refer to occupational therapy.

In case study research conducted by (Ervi & Levi, 2023) at the Hargo Dadali Nursing Home, it was implemented and the research proved that before being given brain exercises, respondents showed that their ability to think, focusing and remembering was poor. After being given brain exercises, respondents experienced the ability to think better. focusing and remembering become better or increase, this is related to the duration of time.

Nursing Implementation

Implementation is the management and realization of nursing interventions that have been prepared in the planning stage and aimed at nursing orders to help clients achieve the expected goals (Dian & Awaludin, 2022). In implementing the nursing diagnosis of memory disorders, the author

provides reality orientation and memory training (brain exercises) with the aim of improving memory. The patient came with complaints of difficulty remembering the names of those closest to him, nurses, family and difficulty remembering the date, day and year. The results of the physical examination obtained BP: 160/90 MmHg, pulse frequency: 88x/minute, RR: 25x/minute, Temperature : 36°C. From this data, the author has provided reality orientation and brain exercises to patients with memory disorders. By providing brain exercises and reality orientation, patients get an improvement in memory.

Brain exercise can improve memory changes. The trigger factor that causes the client to experience memory problems is depression so that he easily forgets several things. Another factor is the client's old age which causes the client's memory to be at risk of decreasing because the elderly's memory is not sharpened/unused. Brain exercise movements have the benefit of increasing the flow of oxygen to the brain so that it can improve coordination and concentration. Recommended as an alternative non-pharmacological management for elderly people with decreased cognitive function. Nursing actions that support improving memory besides brain exercises include playing puzzles, folding aprons, tissues and coloring. Putting puzzles together, folding aprons and tissues are also beneficial for mental health and can help reduce stress. All activities can improve memory. All activities carried out make the brain continue to think so that elderly people do not forget easily (Widianti, 2010).

Nursing Evaluation

The results of the nursing evaluation on Mrs. Ng with a nursing diagnosis of memory impairment after carrying out nursing actions for 3 x 8 hours showed the following results: after giving brain exercise exercises for 10-14 minutes the author carried out a re-examination and found that Mrs. Ng was able to remember the names of the people closest to her, the family nurse and remember dates, days and years.

CONCLUSION

Brain exercises can improve language skills and memory, including the right brain and left brain, to the cerebrum, the brain flows to the cerebrum and affects cognitive function.

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