



The Effect of Puzzle Cognitive Therapy on the Ability of the Elderly in Hulubalang Village, Paleleh District, Central Sulawesi Province

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ABSTRACT

As we age, the human body will undergo physiological and psychological changes. There are setbacks and psychological changes that affect the cognitive abilities of the elderly, thus affecting the inability or difficulty to carry out daily living activities related to the independence of the elderly or activity daily living (ADL). Research Objectives: The purpose of this study is to determine the effect of Cognitive Puzzle Therapy on the ability of the level of independence of the elderly in Hulubalang Village, Paleleh District. The research design used quantitative pre-experiment with a pre-post test design, involving a total of 31 respondents using purposive sampling. Research Results: The results of the study using the non-parametric statistical test Wilcoxon signed rank test showed that there was an Effect of Puzzle Cognitive Therapy on the Ability of the Independence Level of the Elderly in Hulubalang Village, Paleleh District, as evidenced by p. value (0.000 < 0.05). Conclusion: Cognitive Puzzle Therapy has a significant effect on improving the independence ability of the elderly in Hulubalang Village, Paleleh District so that it can be used as an exercise to improve the ability of the elderly to carry out daily activities independently.

INTRODUCTION

The elderly or often known as the elderly is someone over 60 years old who has experienced an aging process characterized by a decline in several bodily functions. The many decreases in body function, one of which is the extremities experienced by an elderly person, causing a decrease in the quality of life in the elderly [1].

According to World health organization [2] The number of elderly populations, which refer to those aged 65 or over, has increased by up to threefold. From about 260 million in 1980 to 761 million in 2023. The number of elderly people in the world is projected to be 1.4 billion in 2030 and 2.1 billion in 2050 and could rise to 3.2 billion by 2100 With a meta-analysis, the prevalence of fall risk in the elderly in the world is 26.5%. The WHO (2022) reports that 28–35% of people aged 65 and over fall each year, and 32–42% for those over 70.

Based on [3], in 2023, the number of elderly people in Indonesia will reach 22.6 million people, or 11.75% of the total population of Indonesia. This means that Indonesia is entering a phase. Ageing Population, or the structure of the elderly population, where for every 10 Indonesians, 1 person is an elderly. Of the number of the elderly, 26.76% are 70-79 years old, and 8.65% are 80 years old and older. In terms of gender, 52.28% of the elderly are women, and 47.72% are men, almost 12 percent or around 29 million Indonesians are in the elderly category, and the number of elderly people in Indonesia will continue to increase until 2045 and it is estimated that Indonesia will have 20 percent or around 50 million elderly people. The incidence of falling alone in Indonesia which occurs in the elderly is around 43.47%, this incident occurs 1-2 times in 1 year.

The decline in cognitive function of the elderly affects independence in the elderly, including the ability of the elderly to carry out daily activities such as: bathing, dressing neatly, going to the toilet, changing places, being able to control defecation or defecation, and being able to eat on their own. If an elderly person cannot do the activities mentioned above independently, it means that the elderly are said to be unable to carry out activities or have dependency in Activity Daily Living [4]

Elderly people who experience a decline in cognitive function can result in difficulties in meeting the needs of their daily activities, which means that it will affect the level of independence of the elderly themselves. Depression, stress and anxiety will cause a decrease in blood flow speed and stress triggers the release of hormones Glucocorticoids which can degrade the function Cognitive so that there is a high risk of developing dementia so that it affects the level of independence [5].

The development of self-reliance is an important issue throughout the span of human life. The development of independence is strongly influenced by physical changes, which in turn can trigger emotional changes, cognitive changes that provide logical thinking about the way of thinking that underlies behavior. Independence requires an individual's readiness, both physical and emotional readiness to manage, manage and carry out activities on their own responsibility without relying heavily on others [1].

Puzzle is a picture that is divided into pieces of pictures to hone thinking skills, and practice patience, the application of this puzzle therapy is an exercise Puzzle that can stimulate the brain by providing adequate stimulation to maintain and improve functional ability Puzzle the remaining brain. The brain will start working when it takes, processes, interprets the absorbed images or information, and retains the information to be obtained [6].

Based on the results of a preliminary study conducted in Hulubalang Village, Paleleh District, in 2022 – 2023, the number of elderly people was 44 people, in January – September 2024 there were a total of 45 elderly people. Based on interviews conducted by researchers on 10 elderly people, 8 elderly people need partial assistance because they have the inability to eat on their own so they have to be helped by their families, dressed and helped by family members, moving from one place to another calling other family members to help them, and 2 elderly people need total help because they complain that their joints sometimes feel painful when moved and the elderly sometimes forget the parts of their house so that for toileting, the elderly wet their pants because they do not know where the bathroom is located in their house. Follow-up interviews with the elderly, all of the elderly have never heard of and received education and the application of Cognitive Therapy to increase their productivity and independence by health workers in Hulubalang Village, Paleleh District.

Based on the researcher's observation that out of 10 elderly people, a total of 8 elderly people are reluctant to do daily activities because they think that they are weak so that there is no willingness to do activities independently, lack of interest and motivation in living daily and doing daily activities because of stress thinking about the aging process that occurs from day to day and overall experiencing symptoms that indicate a decrease in memory, Such as forgetting directions to the toilet, sometimes forgetting the name of another family, forgetting where to put important items so that they are not independent and need help in carrying out daily activities. Of the 10 elderly people, 8 elderly people also experienced a decrease in vision function of cataracts, glaucoma, and 2 elderly people had a history of hospital admission with non-ulcer diabetes, as well as high cholesterol levels so that they often complained of fatigue and weakness as well as aches and pains in several parts of the body.

RESEARCH METHODS

This research was conducted in Hulubalang Village, Paleleh District in December 2024–January 2025. This study used a quantitative approach with a pre-experimental design of one group pretest-posttest, involving 31 elderly people selected through purposive sampling techniques, with independent variables of puzzle cognitive therapy and dependent variables of the level of independence of the elderly measured using the Katz Index, and data analysis was carried out using the Wilcoxon Signed Rank Test through SPSS 25.

RESULTS

Characteristics of Respondents

Table 1. Distribution Based on Respondent Characteristics

Yes	Respondent Characteristics	Classification	Frequency (n)	Present (%)
1.	Age	Elderly (60 - 74 Years Old)	21	67.7
		Elderly (75 - 90 years old)	10	32.3
2.	Gender	Male – Male	10	32.3
		Women	21	67.7
3.	Last Education	SD	18	58.1

Yes	Respondent Characteristics	Classification	Frequency (n)	Present (%)
	Level	Junior High School	2	6.5
		High School	2	6.5
		PT	3	9.7
		No School	6	19.4
	Total		31	100.0

(Source: Primary Data, 2025)

In the age group, the majority of respondents were in the elderly (60 - 74 years) as many as 21 people (67.7%), with an average female gender of 21 people (67.7%), and 18 people with elementary education (58.1%).

Univariate Analysis

The Level of Independence of the Elderly Before Cognitive Puzzle Therapy in Hulubalang Village, Paleleh Village

Table 2. The Level of Independence of the Elderly Before Cognitive Puzzle Therapy in Hulubalang Village

Yes	Independence Level	Red	Frequency (n)	Present (%)
1.	Self-Sufficient	6	6	19.4
2.	Partial Assistance	4.2	11	35.5
3.	Dependency	1.6	14	45.2
	Total		31	100%

(Source: Primary Data, 2025)

Based on the table above, the majority of the elderly before cognitive therapy is undertaken: Puzzle 14 people (45.2%) have dependency in carrying out daily activities with an average independence score of 1.6, then there are the elderly who have partial dependency as many as 11 people (35.5%), with an average score of 4.2, and the lowest is the elderly who are independent of 6 people (19.4%) with an average score of 6.

The Level of Independence of the Elderly After Cognitive Puzzle Therapy in Hulubalang Village, Paleleh Village

Table 3. The Level of Independence of the Elderly After Cognitive Therapy in Puzzle Hulubalan Village, Paleleh Village

Yes	Independence Level	Red	Frequency (n)	Present (%)
1.	Self-Sufficient	6	20	64.5
2.	Partial Assistance	4.9	10	32.2
3.	Dependency	1.9	1	3.2
	Total		31	100%

(Source: Primary Data, 2025)

Based on the table above, the majority of the elderly after cognitive therapy: Puzzle have been independent in carrying out daily activities of 20 people (64.5%), with an average score of 6, in the group with partial help on average – there are 10 people (32.2%), with an average score of 4.9, and there are still elderly people who have a total dependency of 1 person (3.2%), with an average score of 1.9.

Bivariate Analysis

Data Normality Test

Before bivariate analysis is carried out, data normality tests must be carried out in the intervention group before and after treatment. The data normality test is carried out to determine what test will be used. The results of the data normality test with Shapiro wilk ($n = 31 < 50$) are as follows:

Table 4. Normality Test of Hemodynamic Stability After Treatment

Variable	Groups	<i>p. value</i>
Independence Level	<i>Pretest</i>	0.001
	<i>Posttest</i>	0.000

*Shapiro-wilk

Based on table 4 above, it shows that the independence level variable does not meet the assumption of normality (p value < 0.05), so the test used in the paired data group (pre-post test) is the non-parametric Wilcoxon signed rank test.

The Effect of Cognitive Therapy: Puzzle on the Ability of the Elderly to Be Independent.

Table 5. The Effect of Cognitive Therapy: Puzzle on the Ability of the Elderly in Hulubalang Village, Paleleh District.

Groups	<i>n</i>	Red	SD	Δ (Difference)	<i>p.value (z)</i>
<i>Pretest</i>	31	3.16	1.846	-2.03	0.000
<i>Posttest</i>	31	5.19	1.138		

(Source: Primary Data, 2025)

Based on the results of the study, it showed that the average elderly before therapy showed partial dependence with an average independence score of 3.16 then after cognitive therapy Puzzle increased to 5.19, this shows a score difference of 2.03 between before and after treatment. The results of statistical analysis using the wilcoxon signed rank test obtained a p -value of 0.000 (≤ 0.05), Based on this value because the p value ≤ 0.05 can be concluded that there is an Effect of Cognitive Therapy: Puzzle on the Ability of the Independence Level of the Elderly.

DISCUSSION

Characteristics of Respondents

Age

The results of the study showed that the majority of the respondents' age group was in the elderly (60 - 74 years) as many as 21 people (67.7%), this result was related to respondents who had just entered the elderly phase saying that it was difficult to adapt to the limitations they currently have, so that they felt that when they started to enter the age of 60 years they had dependence on other family members, especially in terms of activities.

The research is in line with the results of the above research is a research conducted by [7] with the title there is a close relationship between Age, Gender, Education and Occupation with Activity Daily Living (a) In the elderly at the Gribig Health Center, Kudus Regency.

The researcher assumes that when the elderly begin to enter the age of 60 years old, there is an adjustment or adaptation to the physical changes of the previous respondents, so that when adaptation cannot be carried out properly, the elderly have a high dependence on other family members.

Gender

The results of the study showed that the average female respondents were 21 people (67.7%), the results of this study were related to the elderly who are female have a high dependency nature compared to men, emotionally they also said they wanted to be more noticed by family members and helped to carry out

daily activities. The results showed that most of the female respondents had a level of infertility with 22 people (68%), 6 people who were independent (18.7%) and 4 people at the level of dependency (12.5%).

In line with research conducted by [8] with the title "Gender Relationship to the Level of Independence in Caring for the Elderly" shows that there is a significant relationship between gender and the level of self-independence in caring for the elderly.

According to the researchers' assumption, elderly women have weaker physical strength, so elderly women tend to be assisted more in daily activities compared to elderly men.

Education Level

The results of the study showed that the average of the elderly with the last elementary education was 18 people (58.1%).

In line with the theory that states that the higher a person's level of education, the higher the knowledge he gets. Higher education is able to maintain their lives longer so that they can maintain their independence because they tend to maintain their health so that the elderly with higher education will try to be more independent than other levels of education. On the other hand, the elderly with low education tend to have lower independence. Elderly with low education are also more at risk of cognitive impairment, In this case, the cognitive ability that shapes a person's way of thinking includes the ability to understand factors related to disease in an effort to maintain his health. Education is also an effort to develop personality and abilities inside and outside of school and lasts a lifetime [9].

Research conducted by [10] with the title "The relationship between education level and the independence of the elderly in meeting daily needs" shows that there is a relationship between the level of education and independence. elderly in meeting their daily needs.

Based on the description above, the researcher's assumption is that the higher the level of education of the elderly, the higher the independence, because education affects the behavior of the elderly in achieving an optimal degree of health, especially in improving their ability to carry out daily activities.

Univariate Analysis

The Level of Independence of the Elderly Before Cognitive Puzzle Therapy in Hulubalang Village, Paleleh Village

Based on the results of the study, the majority of the elderly before cognitive therapy: Puzzle had a dependence in doing daily activities of 14 people (45.2%) with an average independence score of 1.6, based on the findings of the researcher the results of this study were associated with the elderly who needed help in carrying out daily activities such as needing help when bathing, such as brushing their bodies, but could brush their own teeth, can dress themselves, move places by themselves, toileting is assisted because the elderly usually wet their pants, the elderly experience urinary incontinence so that it is difficult for the elderly to control their urination and cause the elderly to often wet their beds in places they do not want such as beds, the inability to eat independently because the elderly experience a decrease in musculoskeletal function due to diseases related to gout arthritis and rheumatoid arthritis, so that they experience a decrease in the ability to carry out daily activities and require family participation in carrying out activities.

The above results are in line with the theory that comorbidities in the elderly are at high risk of having an impact on disability and dependence on the elderly. Disabilities can cause obstacles and difficulties to participate fully and effectively in daily life. Elderly people who suffer from illness also tend to be unable to carry out daily activities because they feel unhealthy, lethargic and unfit, this will also affect the quality of life related to the psychological condition of the elderly so that the elderly will always have total dependence and consider that they are unable to do anything without their family [11].

In line with research conducted by [12] with the title "Factors Related to the Level of Independence of the Elderly in Doing Activity Daily Living at PSTW Budhi Mulia 01 Cipaiung, East Jakarta, it was shown that comorbidities affect the level of independence in the elderly where the presence of comorbidities can limit a person's ability to carry out daily activities (Activity of Daily Living / ADL) independently, such as bathing, dressing, eating, and moving.

Based on the description above, it can be concluded that the diseases suffered by the elderly will affect the elderly in terms of independence because when the symptoms of the disease suffered appear or complaints are felt, it will hinder the elderly in carrying out daily activities independently.

In the elderly who have partial dependency as many as 11 people (35.5%), with an average score of 4.2, based on the findings of the researcher this is associated with the elderly who are able and initiative in carrying out daily activities but still need help from some other family members such as the elderly do not need help but ask for help in parts of the body that cannot be reached such as the back and legs, able to wear clothes but unable to tidy them up and down on their own, able to get up and down the bed by themselves, able to control the camp, able to feed themselves but slowly, some of the food to be cut requires more energy such as fish that has been cooked well by family members so that the cooked food can be cut without help.

Based on the description above, it can be concluded that the elderly who experience moderate dependency are elderly people who have the initiative and ability to carry out daily activities independently but still need direction and assistance from other family members so that the activities carried out can be carried out properly.

In the lowest group, there were 6 independent elderly people (19.4%) with an average score of 6, who were independent before cognitive therapy: Puzzle, based on the findings of the researcher, this result was associated with the elderly who were able to carry out daily activities without supervision by the family such as bathing without assistance, wearing clothes, such as shirts and pants wearing their own shoes without assistance, moving places without aids and getting up and down the bed without assistance, toileting independently from the moment of undressing and putting clothes back on in the toilet, controlling the urge to urinate, and eating and feeding themselves. The elderly who have high independence are motivated to carry out their daily routines assisted by family support who always motivate the elderly to be independent and believe in their abilities.

The above results are in line with the theory that states that One way that can be used in increasing the independence of the elderly in daily activities is through family support. Family support includes four family supports, namely instrumental, informative, judgmental, and emotional support. Of the four family supports, which have a great impact on the elderly are in the form of assessment support in the form of praise and encouragement that will motivate the elderly to be independent to carry out activities every day. Through assessment support, the elderly feel cared for and loved by other families so as to reduce the dependence of the elderly on others to fulfill their daily activities [13].

Based on the description above, it can be concluded that the elderly are independent in carrying out daily activities due to the motivation and support provided by the family in achieving every activity that can be done without the help of other family members.

The Level of Independence of the Elderly After Cognitive Puzzle Therapy in Hulubalang Village, Paleleh Village

Based on the results of the study, it shows that the majority of the elderly after cognitive therapy: Puzzle have been independent in carrying out daily activities of 20 people (64.5%), with an average score of 6, based on the findings of the researcher this is related to the implementation of Puzzle therapy routinely for 5 consecutive days – also improving the cognitive of the elderly so that the elderly become more independent and no longer dependent on other family members. The elderly in terms of increasing the level of independence are able to carry out daily activities without supervision by the family such as bathing without assistance, wearing clothes, such as clothes and pants, wearing their own shoes without assistance, moving places without aids and getting up and down the bed without assistance, toileting independently from the time of undressing and putting back on clothes in the toilet, and in the elderly who experience incontinence the frequency of bedwetting or Accidental urination is reduced, the elderly can control their urination until it reaches the toilet, can eat, cut their own fish and feed themselves slowly at every meal. The elderly said that Puzzle is a game that helps train the memory and focus level of the elderly, so that the elderly remember the daily schedule of activities that are routinely carried out every day, the frequency of senile is reduced so that the elderly can carry out their daily activities without assistance.

In line with the theory that states that The decline in cognitive function of the elderly affects independence in the elderly, including the ability of the elderly to carry out daily activities such as: bathing, dressing neatly, going to the toilet, changing places, being able to control defecation or defecation, and being able to eat on their own. If an elderly person cannot do the activities mentioned above independently, it means that the elderly are said to be unable to carry out activities or have dependency in Activity Daily Living [4]. Elderly people who experience a decline in cognitive function can result in difficulties in meeting the needs of their daily activities, which means that it will affect the level of independence of the elderly themselves. Depression, stress and anxiety will cause a decrease in blood flow speed and stress triggers the release of hormones Glucocorticoids which can degrade the function Cognitive so that there is a high risk of developing dementia so that it affects the level of independence [5]

In line with the research conducted by [14] There is a relationship between the cognitive function of the elderly and the level of independence in the elderly in the Cibeber RW 14 Health Center Area where maintaining or improving cognitive function in the elderly can help them to remain independent and maintain a good quality of life. Therefore, interventions aimed at maintaining the cognitive health of the elderly are essential to support their independence in old age.

Based on the description above, it can be concluded that the Puzzle game is one of the alternative therapies that can be used to improve the cognitive abilities of the elderly related to the control of emotional changes and memory so that it can increase independence in the elderly in carrying out daily activities.

In the group with partial assistance, there were 10 people (32.2%), with an average score of 4.9, based on the findings of the researcher, this is related to the elderly who still have some dependence on daily activities such as still needing help from other family members such as the elderly who do not need help but

ask for help in parts of the body that cannot be reached such as the back or legs, able to wear clothes but unable to tidy them up and down on their own, able to get up and down the bed by themselves, able to control the camp, able to feed themselves but slowly, some of the food to be cut requires more energy such as fish that has been cooked well by family members so that the cooked food can be cut without help. At the time of the implementation of therapy, the elderly are able to do therapy on their own but are not confident in the results of their work, the elderly always ask for validation from their families, causing the elderly to be less focused on the implementation of therapy. The elderly also experience mood swings when their work is not seen or noticed in the process of putting together puzzles by their families and are afraid that their work results are not in accordance with their family's expectations.

In line with theories that other mood disorders can cause the elderly to feel tired, lose interest in activities, and have difficulty concentrating, all of which can hinder their ability to perform basic tasks such as bathing, dressing, eating, and moving. Seniors with mood swings have extreme mood swings such as feeling very happy and then very sad in a short period of time, irritable or offended, becoming more sensitive and reactive to certain situations, as well as excessive feelings of anxiety and worry about things that may not be a problem for others.

Research conducted by (Ariska, 2020), on "The Relationship of Mood Disorders with Decreased Functional Ability" shows that the elderly with mood disorders can decrease the overall functional abilities of the elderly, including their physical and mental health, as well as their ability to participate in social activities. When seniors experience mood disorders, they may need more help from others to carry out daily activities, which can lead to feelings of dependency and loss of self-esteem.

Based on the description above, it can be concluded that mood disorders can cause a decrease in energy, motivation, and interest in the elderly in carrying out daily activities independently.

In the lowest group, there are still elderly people who have a total dependency of 1 person (3.2%), with an average score of 1.9, based on the findings of elderly researchers in this category after conducting research, still need help when bathing, the elderly cannot dress themselves, move places on their own with the help of family members or canes and are held by their families, toileting Helped because the elderly usually wet their pants, the elderly still experience urinary incontinence so that it is difficult for the elderly to control their urine and causes the elderly to often wet their bed even before reaching the toilet, the elderly eat with a feed. The elderly with this dependency experience delays in the implementation of therapy, the elderly find it very difficult to compile a puzzle so that the results obtained are not optimal so that it does not affect the expected level of independence of the elderly. The elderly are not able to solve the puzzle on their own with the specified time, always want to be assisted by other family members in carrying out activities and activities so that the level of independence of the elderly is still in the category of dependence.

In line with the theory that cognitive decline is characterized by delays in thinking in the elderly caused by brain disorders that they cannot control. Elderly people who are slow to think show characteristics of dementia events such as difficulty remembering, confusion, or fear. Dementia is a symptomatic syndrome caused by impaired brain function. Elderly people with dementia will experience cognitive impairment gradually. Elderly people who experience dementia, in addition to experiencing gradual cognitive weakness, will also experience a decline in daily living activities (activity of daily living/ADL), in addition to the elderly cannot understand and communicate with other people/the environment, do not know family members/other people [15].

Based on the description above, researchers assume that the condition that causes the elderly to have difficulty in doing therapy is the bad dementia condition that they experience and have not received \pm treatment for 10 years.

Bivariate Analysis

The Effect of Cognitive Therapy: Puzzle on the Ability of the Elderly to Be Independent.

The implementation of this study began with an explanation to the respondents about the purpose of implementing cognitive therapy: Puzzle in increasing the level of independence of the elderly in carrying out daily activities, the average respondent was cooperative and willing to sign an informed consent which explained that the implementation of the study would be carried out for 5 days with a frequency of 1 time/day. In its implementation, the average elderly person experiences dependence in carrying out activities. Before the therapy action was carried out, the level of independence of the elderly was measured and an average independence score of 3.16 (Category Poor) was obtained.

The next stage is the implementation of the research starting from the researcher giving instructions to the elderly how to play: Puzzles according to the available patterns, the elderly are given time for \pm 15 – 20 minutes to complete the given puzzle. The elderly are given a Puzzle with 20 pieces and when the elderly can complete it the next day it is upgraded to 30 Puzzle pieces, when the elderly have not been able to complete the Puzzle well according to the specified time, it is repeated the next day. Each elderly person finishes compiling the puzzle, the elderly are given praise for their work.

Therapy was carried out for 5 days with a frequency of 1 time/day in the morning or evening with a duration of $\pm 10 - 15$ minutes, and after Puzzle therapy the level of independence of the elderly increased by an average of 5.19, this shows a score difference of 2.03 between before and after treatment. After the game was carried out, the researcher asked about the feelings of the elderly after the therapy was carried out and the elderly said that this game was interesting, it could improve focus and memory so that the elderly remembered more of their daily activity routine without having to ask questions or depend on other family members.

Based on the results of statistical analysis using the Wilcoxon signed rank test, the p-value was 0.000 (≤ 0.05), which means that there is an Effect of Cognitive Therapy: Puzzle on the Ability of the Elderly to Independence Level.

The results of this study are in line with the research conducted by The results of the research conducted (Sabrina et al. 2021) entitled "The Influence of Cognitive Therapy: Puzzle Towards Increasing the Functional Capacity of the Elderly" shows that H_0 is accepted, which means that there is a significant influence between Cognitive Therapy on the functional capacity of the elderly in terms of the independence of the elderly in carrying out activity daily living (ADL).

Other research in line was also conducted by (Sapardi & Andayani, 2021) that there is an influence of Cognitive Therapy in improving the cognitive function of the elderly. According to previous research, researchers used a sample of 16 elderly people and it has been proven that a total of 12 elderly people experienced an improvement after being given Puzzle therapy, in this case therapy can be used as an alternative to improve the memory of the elderly, due to a decrease in cognitive function It is a common occurrence in the elderly, so an innovation is needed to develop nursing interventions in improving cognitive function in the elderly.

Aging can affect daily social activities such as interacting with others, performing daily tasks, and remembering important information due to reduced cognitive function. Decreased cognitive function in the elderly can occur due to various factors such as changes in emotions, behavior, and disturbances in carrying out daily activities independently such as maintaining nutritional intake, body hygiene, and other activities. Elderly independence includes the ability of the elderly to carry out daily activities such as: bathing, dressing neatly, going to the toilet, changing places, being able to control defecation or defecation, and being able to eat on their own. If an elderly person cannot do the activities mentioned above independently, it means that the elderly are said to be unable to carry out activities or have dependency in Activity Daily Living [4].

The development of self-reliance is an important issue throughout the span of human life. The development of independence is strongly influenced by physical changes, which in turn can trigger emotional changes, cognitive changes that provide logical thinking about the way of thinking that underlies behavior. Independence requires an individual's readiness, both physical and emotional readiness to manage, manage and carry out activities on their own responsibility without relying heavily on others [1].

The decline in cognitive function that occurs in the elderly is characterized by signs and symptoms such as memory impairment, changes in perception, problems in communication, decreased focus, attention and obstacles in carrying out daily tasks. This decline in cognitive function will increase with age. The elderly in general will experience a decline in cognitive function, memory and intelligence along with the continued increase in age [16]

Elderly people who experience a decline in cognitive function can result in difficulties in meeting the needs of their daily activities. Improving the cognitive abilities of the elderly can be done with pharmacological therapy and non-pharmacological therapy. Non-pharmacological therapies that can be used to reduce stress such as music therapy, spiritual therapy, relaxation techniques, and cognitive therapy, One of them is therapy Puzzle. This type of game can be an alternative game for the elderly who want to train memory and concentration. In this game, players are asked to compose pictures by matching existing pictures. These games can be played independently or in groups, and are often considered a fun type of brain exercise. This game requires concentration, precision, and good memory skills to be able to complete it well [16]

Puzzle is a picture that is divided into pieces/pieces of pictures to hone thinking skills, and practice patience, the application of this puzzle therapy is an exercise Puzzle that can stimulate the brain by providing adequate stimulation to maintain and improve functional ability Puzzle the remaining brain. The brain will start working when it takes, processes, interprets the absorbed images or information, and retains the information to be obtained [6].

Based on the description above, the researcher concluded that there is an Effect of Cognitive Therapy: Puzzle on the Ability of the Elderly to Independence Level.

CONCLUSION

Based on the results of the study, it is known that before being given cognitive puzzle therapy, the majority of the elderly were in the dependency category with an average score of independence of 3.16, while after intervention the score increased to 5.19 with the majority of respondents in the independent category.

The results of the statistical test using the Wilcoxon Signed Rank Test showed a value of $p = 0.000 (\leq 0.05)$ which indicates a significant effect of puzzle cognitive therapy on increasing the independence of the elderly. These findings show that simple interventions in the form of puzzle games are able to improve cognitive function and reduce dependence in daily activities, so that they can be used as one of the non-pharmacological strategies to support the independence and quality of life of the elderly.

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