

The Description of Cognitive Function on Dementia Elderly in Ciparay Tresna Wreda Social Protection Center

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Abstract: Along with the health and welfare of the population, the number of elderly are increasing. It caused the number of degenerative diseases getting higher. One of them is dementia. Dementia is a global cognitive impairment progressive. Impaired cognitive function can be quite serious health problems seriously which can cause psychological, social and economic such as social isolation, financial difficulties, motor is retardation, aggravate other symptoms and identify the quality of life of the elderly. The purpose of this study is a picture on description of cognitive function on elderly dementia at the center of social protection for elderly in Ciparay Bandung. This study used descriptive quantitative. Design technique purposive sampling from 40 elderly people with dementia aged > 60 years, they were in health based on nursing assessment and nine signs checking, results of score the Mini Mental State Examination (MMSE) < 24. The research instrument used the Trail Making Test - B (TMT-B) with a frequency distribution analysis data. The results of this study were found data majority elderly dementia cognitive impairment were less and elderly dementia cognitive impairment just a little. From this research, it can be concluded that the description of cognitive function in elderly patients with dementia in the Center of Social Protection for Elderly in Ciparay majority experienced less cognitive function. Recommendations for the BPSTW Ciparay is necessary holding of activities of brain for the elderly like play crosswords puzzle, embroider and other activities.

1 INTRODUCTION

Based on WHO data, in recent years there has been an increase in the elderly population in Southeast Asia by 8% or about 142 million people. This condition is expected to increase threefold by 2050. Nowadays there are special health challenges with increasing number of elderly. The emergence of degenerative and multipathological problems, such as decreased biological reserves, changes in symptoms and signs of disease, disruption of functional status of elderly patients is most notable is the decline in cognitive function (Tsilimparis et al., 2013).

A meta-analytic study was conducted to examine the hypothesis that aerobic fitness training enhances the cognitive vitality of healthy but sedentary older adults. Eighteen intervention studies published between 1966 and 2001 were entered into the analysis (Colcombe and Kramer, 2003). The phenomenon of worry is considered to arise from cognitive processes involved in anxiety, that serve to

maintain high levels of vigilance for personal danger. Rather than rely on self-report alone, the research described here draws on information processing methodology, to investigate this hypothesized cognitive function (Mathews, 1990).

This individual differences study examined the separability of three often postulated executive functions—mental set shifting (“Shifting”), information updating and monitoring (“Updating”), and inhibition of prepotent responses (“Inhibition”)—and their roles in complex “frontal lobe” or “executive” tasks. One hundred thirty-seven college students performed a set of relatively simple experimental tasks that are considered to predominantly tap each target executive function as well as a set of frequently used executive tasks: The Wisconsin Card Sorting Test (WCST), Tower of Hanoi (TOH), random number generation (RNG), operation span, and dual tasking (Miyake, et al., 2000).

Cognitive function is part of the lofty cortical function, where knowledge of noble cognitive

functions links human behavior with the nervous system. Cognitive function consists of the ability of attention, language, memory, visuospatial and executive functions. Impaired cognitive function occurs when one or more cognitive functions are damaged.

There was evidence of an increase in responsiveness, strongly in the analogue and less in the digital simulation, in choice reaction time. This could be associated with an effect on the angular gyrus that acts as an interface between the visual and speech centres and which lies directly under and on the same side as the antenna. Such an effect could be consistent with mild localized heating, or possibly a non-thermal response, which is nevertheless power-dependent (Preece, 1999).

Dementia is a general term used to describe the progressive destruction of global cognitive function and affect normal occupational activity as well as daily life activities. Diseases that increase the symptoms of dementia include Alzheimer's disease, vascular problems such as multi-infarction dementia, normal pressure hydrocephalus, Parkinson's disease, chronic alcoholism, picky diseases, Huntington disease brain progressively), and Acquired Immune Deficiency Syndrome (AIDS). The prevalence of dementia disorder becomes higher with increasing human age, the most common form of Alzheimer's disease in the elderly, followed by multi-infarction dementia (Folkman et al., 1997).

These results are important in that behavior analytic methods were shown to have utility for: (1) assessing the functional relationship between environmental contingencies and behaviors related to differential diagnosis; and (2) evaluating the independent and interactive effects of behavioral and pharmacologic treatments (Kelly et al., 1989).

The results from Experiment 1 indicate that measures of working-memory capacity and verbal information-processing speed correlate with speech recognition in noise. The pattern of results was consistent with the idea that when auditory processing becomes very difficult, because of an adverse listening situation and a damaged cochlea, the individual's cognitive function influences performance to a high degree (Pichora- Fuller et al., 1995).

Alzheimer dementia (dementia) is a degenerative disease in which the decline in brain function that affects emotion, memory, decision making, behavior and other brain functions that interfere with daily activities (Herholz et al., 2002). Alzheimer's disease is most commonly found in aged parents & gt; 65

years, but can also attack people aged around 40 years.

Previous research was conducted on the description of cognitive function in elderly in Three Yayasan Manula in Kecamatan Kawangkoan get result of research obtained 61 people who meet inclusion criteria consist of four men and 57 women. Based on age, and educational level showed the most decrease in cognitive function was at age 75 - 90 years and last elementary school education (Shadlen, 2001).

After conducting preliminary study at Tresna Wredha Ciparay Social Protection Center, there were 63 dementia population data from 150 elderly people with initial screening using Mini Mental State Examination (MMSE). So based on the background that has been described the researcher will conduct research on "The Cognitive Function of Dementia in Elderly Age at Social Protection Center Tresna Wreda Ciparay Bandung Regency".

2 METHODS

The design used in this study is descriptive quantitative design that aims to describe (describe) the image of cognitive function in elderly dementia at the Center for Social Protection Tresna Wreda Ciparay Bandung Regency.

The population in this study is all elderly dementia as much as 63 elderlies. Sampling technique used is purposive sampling in which the sample was taken based on some considerations. Sample size 40 is dementia elderly according to inclusion criteria 1) Aged more than 60 years, 2) Healthy by anamnesa and vital signs check 3) Dementia elderly with MMSE score less than or equal 24, 4) Understanding research objectives and research procedures, 5) Willing to complete the cognitive ability test by signing informed consent.

The instrument is Trail Making Test - B to examine cognitive function in elderly dementia. TMT - B is a test that measures the planning, organizing, and execution skills of a person. The variable used in this research is cognitive function in elderly dementia.

3 RESULTS

The following will show the demographic characteristics of the results of the study of cognitive

function in elderly dementia at BPSTW Ciparay Bandung regency.

Table 1: Frequency distribution of general characteristics of respondents by sex in BPSTW Ciparay in May 2017.

Gender	Frequency	Percentage
Male	14	35 %
Female	26	65 %
Total	40	100 %

Based on table 1 40 respondents mostly (65%) are female as 26 people are elderly.

Table 2: Frequency distribution of general characteristics of respondents by sex in BPSTW Ciparay in May 2017.

Age Characteristics	Frequency	Percentage
60-74 years old	18	45 %
75-90 years old	21	52,5 %
> 90 years old	1	2,5 %
Total	40	100%

Based on table 2, from 40 respondents, most of them (52.5%) aged 75 - 90 years as many as 21 people elderly.

Table 3: Frequency distribution of general characteristics of respondents based on educational background at BPSTW Ciparay in May 2017.

Education	Frequency	Percentage
N/A	10	25 %
Elementary School	16	40 %
Junior High School	9	22,5 %
Senior High School	2	5 %
College	3	7,5 %
Total	40	100 %

Based on table 3 from 40 respondents almost half (40%) of elementary education background that is as many as 16 people.
Specific Data

Table 4: Frequency distribution of respondent characteristics based on cognitive function in BPSTW Ciparay in May 2017.

Cognitive Function	Frequency	Percentage (%)
Good	3	7,5 %
Bad	37	92,5 %
Total	40	100 %

Based on table 4, Most of the respondents (92,5%) has low cognitive function as many as 37 people.

Table 5: Frequency distribution of respondent characteristics based on Gender and cognitive function in BPSTW Ciparay in May 2017.

Gender	Cognitive Function				Total Number	Percentage
	Good	Percentage	Bad	Percentage		
Male	0		14	37,8%	14	(35%)
Female	3	100%	23	62,2%	26	(65%)
Total	3	100%	37	100%	40	(100 %)

Based on table 5 from 40 respondents, most of them (62.2%) are female as many as 26 people.

Table 6: Frequency distribution of respondent characteristics based on Gender and cognitive function in BPSTW Ciparay in May 2017.

Age	Cognitive Function				Total Number	Percentage
	Good	Percentage	Bad	Percentage		
60-74 years old	2	66,7%	16	43,2 %	18	45 %
75-90 years old	1	33,3 %	20	54,1 %	21	52,5 %
> 90 years old	0		1	2,7 %	1	2,5 %
Total	3	100 %	37	100%	40	(100%)

Table 6 showed that most of the respondents (66,7%) age between 60 - 74 years old have good cognitive function and many of them as many as 54,1% age between 75 -90 have low cognitive function.

Table 7: Frequency distribution of respondent characteristics based on Education and cognitive function in BPSTW Ciparay in May 2017.

Educational Background	Cognitive Function				Total Number	Percentage
	Good	Percentage	Bad	Percentage		
Elementary School	0		16	43,2%	16	(40%)
Junior High School	0		9	24,3%	9	(22,5%)
Senior High School	1	33,3%	1	2,7%	2	(5%)
College	2	66,7%	1	2,7%	3	(7,5%)
N/A	0		10	27,1%	10	(25%)
Total	3	100%	37	100%	40	(100%)

Table 7 showed that as many as 66,7% respondents with college educational background have good cognitive function and those who only attend elementary school and did not attend any school have low cognitive function.

4 DISCUSSION

4.1 The Description of Cognitive Function of the Elderly in BPSTW Ciparay

From 40 respondents, almost all respondents (92,5%) has low cognitive function as many as 37 people and most of them are women 62,2% with elementary school educational background. Only 7,5 % have good cognitive function. They are three female elderlies; one senior high school graduate and two college graduates. In addition, the three elderly have daily habits of embroidering, making accessories and activities to hone other skills (see tables 4, 5 and 7)

4.2 The Description of Cognitive Function of the Elderly Based on Gender in BPSTW Ciparay

Table 5 shows that generally cognitive function is less experienced mostly by elderly women (62.2%) while in elderly men as many as 14 people (37.8%). This is in line with the theory according to Myers (2008) that women are more at risk of decreased cognitive function than in men. The theory explains the role of endogenous sex hormone levels in changes in cognitive function. Estrogen receptors have been found in areas of the brain that play a role in learning and memory functions. Then the decline in general and verbal cognitive function is associated with low levels of estradiol in the body. Estradiol is neuroprotective that can limit damage due to oxidative stress and as a protector of nerve cells from amyloid toxicity in Alzheimer's patients.

The results of this study also in accordance with previous research on the Cognitive Functional View of the Elderly at UPT Panti Werdha Mojopahit Mojokerto regency obtained the results of the study of decreased cognitive function weigh more experienced by the women than men. In this study, most data (85.7%) elderly female gender experienced severe cognitive function change that is as many as 12 elderly people (Maryani et al., 2013).

4.3 The Description of Cognitive Function of the Elderly Based on Age in BPSTW Ciparay

Table 6 showed that most of the respondents (66,7%) age between 60 - 74 years old have good cognitive function and many of them as many as

54,1% age between 75 -90 have low cognitive function. This suggests that age significantly affect cognitive function. The older someone is, the greater the chances and the more severe the cognitive function impairment experienced by the elderly. This is because age is one of the factors causing the cognitive impairment.

In the results of this study the average age of aged between 75-90 years experienced a decline in cognitive function ability. In Bandiyah (2009), it is explained that the increasing of one's age hence the speed of process at nerve center decreasing which can cause change of cognitive function decline. The decline of cognitive function before the age of 50 is abnormal and pathological. Changes in cognitive function experienced by almost everyone who reached the age of 70 years. At the age of 65-75 years, there is deterioration in some abilities. Over the age of 80 years, there is considerable deterioration.

Previous research was conducted by Ramadian (2013) on the description of cognitive function in elderly in Three Yayasan Manula in Kecamatan Kawangkoan get result of research obtained 61 people who meet inclusion criteria consist of four men and 57 women. Based on age, and educational level showed the most decrease in cognitive function was at age 75 - 90 years and last elementary school education.

4.4 The Description of Cognitive Function of the Elderly Based on Age in BPSTW Ciparay

Table 7 showed that as many as 66,7% respondents with college educational background have good cognitive function and those who only attend elementary school and did not attend any school have low cognitive function. This suggests that the higher a person's education level is, the more likely it is to increase the chances of maintaining his cognitive function.

This is supported by the explanation in Bandiyah (2009) that the higher the education of a person the easier it will be to receive information, and eventually the more knowledge he has. In this case it can indirectly improve cognitive function in a person. Conversely, a person with a low level of education will inhibit the development of a person's cognitive function of acceptance, information and new things received (Bandiyah, 2009).

In addition, the results of this study also in accordance with previous research by Maryani et al. (2013) regarding the Cognitive Function of the

Elderly at UPT Panti Werdhha Mojopahit Mojokerto regency obtained data mostly (64.3%) who did not attend school decreased weight cognitive function.

As described above that the results of this study are the three elderly people who have good cognitive functions have a daily habit of embroidering, making accessories and activities to hone other skills. This is in line with the theory of Exercise related to the development of cognitive function of the elderly. The elderly who often train their memories by performing day-to-day activities productively and supported by skills has a good cognitive functioning ability compared to the elderly who have a habit at home without practicing cognitive abilities.

These exercises are useful in the attention aspect which refers to a person's ability to respond to specific stimuli by ignoring other stimuli outside his environment. This can help in maintaining good cognitive function.

Based on the description of the results of this study note that cognitive function is determined by various factors. The main and most common factor in all elderly dementia is the exercise of cognitive function or activity that can train the brain. By doing brain training activities such as playing TTS, embroidering, playing chess and others then cognitive function can be prevented severity or at least can maintain the condition of cognitive function owned by elderly dementia.

5 CONCLUSIONS

Based on the research, it can be concluded that:

- The results of this study indicate that the picture of cognitive function in elderly dementia in BPSTW Ciparay Bandung Regency almost entirely suffer less cognitive function and few elderly dementias whose cognitive function is still good;
- The results of this study indicate that the picture of cognitive function in elderly dementia based on sex in BPSTW Ciparay Bandung Regency mostly have less cognitive function in elderly female dementia;
- The results of this study indicate that the picture of cognitive function in elderly dementia based on age in BPSTW Ciparay Bandung Regency is mostly elderly dementia aged 75 - 90 years have less cognitive function;
- The results of this study indicate that the picture of cognitive function in elderly

dementia based on educational background in BPSTW Ciparay Bandung Regency is most of elderly dementia elementary school have low cognitive function with the demand of such raw materials in a certain period. The company can save a significant inventory cost by using appropriate technique in inventory management.

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