

THE COMPARISON OF BASIC FUNCTIONAL STATUS IN ELDERLY BY SEX, AGE GROUP, AND COGNITIVE FUNCTION IN ELDERLY SOCIAL SERVICES REGION BINJAI AND MEDAN TERRITORIES

Rona hanani simamora¹, Harun t. Parinduri², Vita camellia²

Faculty of Medicine, North Sumatera University Medan

Email: rona.hanani@gmail.com

ABSTRACT

One measure of the nation's progress is often seen on the life expectancy of the population. Likewise, Indonesia as a developing country with a fairly good development, thus causing the higher life expectancy of the population. With the increasing life expectancy of the population, causing the number of elderly people (elderly) increased from year to year. The aim of this research is to know the basic cognitive functional status of elderly in the elderly UPT /Elderly Care Region Binjai and Medan territories. Research Method: This study is a cross-sectional analytic approach, which will be collecting data based on questionnaires Barthel Index of Activities of Daily Living (ADL BI). Result: Overall elderly who have the status of basic functional dependent light in elderly social services UPT advanced age and is 25% where sex Mostly women by 35% against in men by 15 %, statistically not found significant differences in status the basic functional on both men and women. ADL dependent type most common are up and down stairs. Differences significant basic functional status found in elderly by education level and MMSE scores.

Keywords: Basic Functional Status, Elderly, Binjai, Medan

1. INTRODUCTION

1.1. Background

Aging (Getting older = *aging*) is a process of gradual disappearance of the network's ability to improve / replace themselves and maintain the structure and function normally and therefore can not survive against an infection and repair damage suffered.

Aging "Normal" should be distinguished from the disease. Some of the functions of the body decreases with age, health problems are inevitable. Most diseases of old age, such as heart disease, cancer, and dementia is the result of a pathological process and not of normal aging. Illness-related defects are usually treatable and can sometimes be prevented. For example, partial hearing problems can be corrected with hearing aids, and the risk of heart disease can be reduced by healthy habits associated with diet and exercise. The same is true for mental health and mental illness in the elderly. One measure of the nation's progress is often seen on the life expectancy of the population. Likewise, Indonesia as a developing country with a fairly good development,

thus causing the higher life expectancy of the population. With the increasing life expectancy of the population, causing the number of elderly people (elderly) increased from year to year. According to Law No. 13 of 1998 on the Welfare of Aging, is the elderly are residents who have reached the age of 60 years and above. The structure of the world's population, including Indonesia, currently leads to the aging process characterized by The increasing number and proportion of the elderly population. USA- data from *the Bureau of the Census*, Indonesia guessing will be experiencing by adding

The senior citizens all over the world, between the years 1990 - 2025 in the amount of 414%. The proportion of senior citizens in Indonesia increased significantly over the past 30 t cope with a population of 5.3 millio (4, 48% of the total population Indone- sia) in 1971 to 19. 3 million (8, 37% of the total population of Indonesia) in 2009. Based on the Indonesian Population Projections 2000-2025 published by the National Development Planning Agency and the Central Bureau of Statistics, the projected number of people in Indonesia in 2014 reached 244.814.900 inhabitants. These figures are approximate 22.1853 million inhabitants (9, 06%) that had aged 60 years and over. The increase in the elderly population is due to an increase in life expectancy as a result of improved health quality. This phenomenon raises global problems. This problem is due to the limitations of the elderly, especially due to aging and biological. One example of the problems arising from the increase in the elderly population is the increase in the elderly dependency ratio. Taking into account these problems, the government needs to formulate various policies, programs and activities to support the health and quality of life of the elderly to be independent, healthy and efficient so as to reduce or even become a burden for the family.^{4,5}

The basic functional status of the elderly is defined as the extent to which an individual is capable of performing a social role independent of physical or mental limitations. The most basic indicator in assessing the functional status is the ability to perform self-care activities, usually known as activities of daily living (*Activity daily Living = ADL*) which include among other things: eating, dressing (dressing), shower, and move (from the chair to the bed or vice versa). ADL measurements have been widely used in the elderly who demonstrated the ability to perform some of the tasks required to continue independent living. Most surveys have found that the prevalence of ADL disability meet increased with increasing age.^{6,7}

Gureje and his colleagues in 2006 in their study entitled Nigerians functional disability in older adults: results of *Ibadan Study of Aging* reported that the prevalence of functional disability in the elderly is 9.2%. In a logistic regression analysis increased risk of disability associated with female gender, increasing age and place of residence in the village.⁸

In a study conducted by Hairi et al in 2010 to see the prevalence and correlation between physical disability and functional disability in the elderly living in rural Malaysia with middle income, they reported that the prevalence rate of functional disability in the elderly 25% of the results objective measures of

functional disability is higher in females than in males.⁹

Andrade and his colleagues in 2012 conducted research on gender differences in life expectancy free of disability in the elderly in Sao Paulo, Brazil, they present an estimate of the prevalence of disability meets the ADL and assistance by age group and gender. Weighted estimates indicate that 19. 2% of the individuals that had aged 60 years and over in Sao Paulo reported experiencing difficulty in performing at least one of the 10 items BI ADL - ADL. The most common type of ADL disability is difficulty in dressing and getting out of bed. ADL disability prevalence is higher in women (22, 3%) than men (14, 9%).¹⁰

Ortega and his colleagues in a study entitled prevalence of disability in a mixed population ≥ 75 years in Spain: A screening survey based on *the International Classification of Functioning*, found that the prevalence of functional disability vary across depending on sex and age. Individuals who experience functional disability in each age group was higher in women compared with men. In the 75-79 age group as a functional disabilit prevalence in women 24. 85% and men 15. 31%, in the 80-84 age group as a functional disabilit prevalence in women 16. 9% and men 13. 12%, in the age group ≥ 85 years the prevalence of disability 20. 87% of men and 8.95%. The prevalence of more severe functional disabilities is higher in individuals that had aged 85 and older compared with younger age groups.¹¹

De Leon and his colleagues, in a study entitled functional disability among elderly blacks and whites in two different areas: New Haven and North Carolina EPESE concluded that overall, blacks have a higher prevalence of 20% in disability fungsional than whites, especially among women, is influenced by differences in health.

In order to overcome the problems of the elderly a lot of effort has been done either through a home or outside the home. One of the tools that should be developed within the framework of social services are elderly elderly social institutions. This activity is the last attempt (*last ressort*) after the family, relatives and communities nearby were unable to provide social services for the elderly. Elderly Social Institution is a social institution that organizes social welfare activities for the elderly, enabling them to enjoy a decent life in old age quietly. With the existence of social services is expected that problems faced elderly can be overcome and have the spirit of life, individually they consider themselves have meaning or meaning and can carry out daily activities well. one social institution that organizes this service is UPT of Elderly Social Services Binjai and

Medan areas with 180 people, consisting of 72 men and 108 women. Rent ang with ages ranging from 60 to 91 years of age¹³

Given the functional status of the base in the elderly is an issue that impacts on elderly people independence in performing activities of daily living, the researcher is interested mela kukan research to see p erbandingan functional status of basic elderly by gender and cognitive function in the elderly age in UPT Services Continue Territory Binjai and Medan.

1.2. Formulation of the problem

By paying attention to the background ata s problems can be formulated problem "Is there differences in the basic functional status in elderly by gender types, age groups, and function of cognitive in UPT/ Elderly Social Services Regional Binjai and Medan? "

1.3. Hypothesis

1. There are differences in the basic functional status in elderly between men and women.
2. There are differences in the basic functional status in elderly patients based group.
3. There is a difference in basic functional status in the elderly based on cognitive function

1.4. Research purposes

General purpose

To know the basic functional status of elderly in the elderly UPT /Elderly Care Region Binjai and Medan.

Special purpose

- a. To determine the ratio of the basic functional status of elderly by gender in Elderly Care Unit Regional Binjai and Medan.
- b. To determine the ratio of the basic functional status of elderly by age group in UPT/ Elderly Care Region Binjai and Medan.
- c. To determine the ratio of the basic functional status of elderly based cognitive function in UPT/ Elderly Care Region Binjai and Medan
- d. To describe the demographic characteristics of the elderly in the Elderly Care Unit Regional Binjai and Medan.

1.5. Benefits of research field of education

The results of this study are expected to provide basic information on the functional status of the elderly living in UPT Elderly Care Binjai and Medan areas.

Field of research

The results of this study are expected to be useful for further research or similar research or other studies that use this research as a reference.

Field of health services

The results of this study are expected to provide input to the government to formulate various policies, programs and activities to support health status and quality of life of the elderly to be independent, healthy and efficient so as to reduce or even do not become a burden for families and communities.

2. LITERATURE

2.1. Basic Functional Status

2.1.1 Understanding Basic Functional Status

According to Mahoney and Barthel functional status is indicated by sensory and sensorimotor capabilities which are very important especially in the field of geriatrics, as it allows for evaluation of the need to get help in daily life¹⁴

There are several ways to assess the functional status and the most prominent is described by *ADL* consisting of basic activities related to personal care (eg, bathing, dressing, using the toilet) and for independent living (preparing meals, doing housework, using the phone) , and the capacity to perform their respective activities is also assessed¹⁴

The basic functional status in elderly is defined as the extent to which an individual is able to perform a social role that is free of physical or mental limitations, the ability to perform self-care activities, usually known as activities of daily living (*Activity daily Living = ADL*) which include among others: to the toilet, eating, dressing (dressing), shower, and move (from the chair to the bed or vice versa)⁶

2.1.2. Type Activity Daily Living

ADL is divided into two groups:

1. Basic ADL

Activities that are oriented on taking care of the body itself. ADL is also called the *Basic Activities of Daily Living (BADLs)* and *Personal Activities of daily Living (PADLs)*. This activity is for the life of the social world, enabling the basic survival and welfare of individuals. These activities include bathing, setting defecation and urination, perwatan themselves, dressing, and *toilet hygiene*¹⁵

2. Instrumental ADL (*Instrumental Activity Daily Living = IADL*)

Activities to support daily life in homes and communities that often require more complex interactions than self-care used in basic ADLs. These activities include other treatments (including choosing and supervising caregivers), pet care, child rearing, communications management, community mobility, financial management, health and maintenance management, household management, food preparation and hygiene, religious obedience, shopping¹⁵

2.1.3. Factors affecting functional status

ADL disability in meeting the strong have a negative effect on the quality of life of the elderly and is one of the most important components in the *causal pathway* that leads to institutionalization (nursing home placement) and mortality in the elderly. Understanding of the processes responsible for the age-related decline in functional status is important to know in order to develop strategies to prevent or delay disability and risks associated with institutionalization and death in the elderly. A number of factors have been associated with the development of disability in ADL and IADL including cognitive impairment, depression, certain chronic conditions, body mass index, functional limitation of lower extremities, low level of physical activity, alcohol use, and visual impairment.^{16,17}

Individual factors have been viewed as being responsible for the functional disability process. Previous studies have shown that functional disability is related to demographics, socioeconomic and health factors. However, several studies in Brazil focus on the relationship of determinants of functional disability to the elderly who suggest that at the individual, sex, educational level, income, occupational, perceptions of chronic illness and health are the most powerful factors associated with functional disability. At a contextual level, the income gap is shown to have an important effect¹⁸

2.1.4. Differences in functional status by sex

Functional status differences between men and women not only reflect biological differences between men and women, but also differences in some things, among others:

- Differences privileges in gender identity. This is possible because of the differences, for example in the education status, employment, and income that can significantly affect the functional disorders.

- The prevalence of chronic diseases is increasing, and the rate of increase may differ between men and women. Where from several studies observed that women age 65 and older be more decreased functional status than men are judged by the degree of fulfillment of ADL and IADL¹⁹

2.2. Elderly

2.2.1. Elderly definition

According to Law No. 13 of 1998 on the Welfare of Aging, is the elderly are residents who have reached the age of 60 years and above.³

According to the *World Health Organization (WHO)* of the elderly can be divided into:

- a. Middle age (*middle age*), is the age group 45 to 59 years.
- b. Elderly (*elderly age*) between 60 and 74 years.
- c. Advanced old age (*old age*) between 75 years to 90 years.
- d. Very old age, over 90 years.

2.2.2. The Aging Process

Many theories are proposed to explain the aging process, but none is satisfactory. Early aging theories argue that aging is not adaptation or genetics. Modern biological theory of aging in man ages is divided into two main categories: *Programmed and damage* or theory *error*. The programmed theory implies that aging follows a biological schedule, perhaps a continuation of the growth and development of the child. The arrangement will depend on changes in genes affecting the system responsible for maintenance, repair and defense mechanisms. While the theory of damage or error emphasizes environmental attacks on living organisms that cause cumulative damage caused by aging. Programmable theory has three sub-categories: the theory of programmed aging, Endocrine theory, and the theory of Immunology. While the theory of damage includes the theory of wear, the theory of life level, the theory of free radicals, the theory of DNA damage.¹⁹

2.3. Barthel Index - Activities Daily Living (BI-ADL)

BI - ADL used since 1955 as Maryland disability index, first published in 1965, was originally developed to assess changes in functional status in individuals with neurological disorders are undergoing rehabilitation, especially patients with stroke. However, because people generally live

longer than in the past so that the elderly population continues to grow, and functional disability associated with age is a concern. High functional disability in the elderly is associated with a higher increase in institutionalization. BI-ADL is a simple tool for assessing self-care activities and the mobility of daily life that has been widely used in a series of geriatric assessments. BI-ADL is one of the standard scales widely used by doctors and researchers to assess disability. This scale includes 10 basic ADL items: feeding, transfers from wheelchair to bed, personal hygiene, up and down toilets / toilet, shower, running flat surface, up and down stairs, dressing, controlling the anus, controlling the bladder. Total scores ranged between 0-20, with a value per item 0, 1, 2, 3. A higher score signifies a better degree of functionality.²¹⁻²⁴

Scores for BI - ADL is:²⁵

0-4 = total dependent

5-8 = dependent weight

9-11 = medium dependent

12-19 = dependent light

20 = Independent

BI-ADL questionnaire information can be obtained from self-reports of patients (*self-report*), of the separate parties that determine the ability of the patient, or of observation (observation).²²

In Indonesia BI-ADL used in studies of functional status in elderly as research conducted by Setiahardja entitled Rate Balance with Daily Activities In Elderly in Nursing Elderly Using Pelkris Semarang with Berg Balance Scale and Barthel Index. BI-ADL questionnaire is a measuring instrument reliable and valid and can be used to measure basic functional status of elderly because it

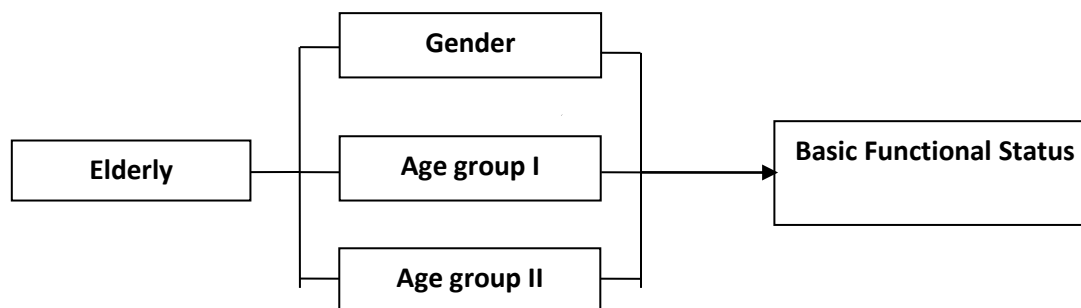
has been tested the reliability and validity by Iskandar Agung in the Faculty Medical University of Indonesia and has been used in various researches in Indonesia.²⁵

2.4 Elderly Care Unit Regional Binjai and Medan

Elderly Social Institution is a social institution that organizes social welfare activities for the elderly, enabling them to enjoy a decent life in old age quietly. North Sumatra Provincial Government are implementing social services through UPT/ Elderly Care Region Binjai and Medan, with an address Independence Street Pioneers Gg. Sasana N0. 2 Exod. Cengkehturi Binjai. The number of inmates currently as many as 180 people, consisting of 72 men and 108 women. They are placed on a 19 (nineteen) guesthouse with a pleasant atmosphere. And three, namely isolation homestead homestead Carnation, Asoka and homestead homestead Nusa Indah which serves to accommodate elderly people who have serious illnesses such as tuberculosis, severe hypertension and so forth which aims to facilitate monitoring of disease of the elderly.¹³

The age of the residents are elderly ranging from age 60 to 91 years. Origin elderly tribes, from eleven tribes namely Java, Banjar, Sunda / Banten, Java, Batak Toba, Mandailing, Aceh, Minang, Malay, Indian and Chinese. The level of elderly education also varies from elementary school to baccalaureate. The religion of this elderly majority is Moslem.¹³

2.5. Conceptual framework



3. RESEARCH METHODS

3.1. Research design

This study is a *cross-sectional* analytic approach, which will be collecting data based on questionnaires *Barthel Index of Activities of Daily Living (ADL BI)*.²⁶

3.2. Place and time

Place of research: Elderly Care Unit Regional Binjai and Medan.

Study Time: January 1st to February 28th, 2014.

3.3. Population and Sample of the study

Target Population: The air Seniors aged ≥ 60 years.

Population affordable: Seniors ≥ 60 years of living in the Elderly Care Unit Regional Toddler Binjai and Medan period from January to February, 2014.

Sample Research: Seniors ber age ≥ 60 years who live in the Advanced Care Unit Binjai and Medan drain region who meet the inclusion and exclusion criteria.

How sampling using *consecutive sampling method*.

3.4. Inclusion and exclusion criteria

Inclusion criteria:

1. with age ≥ 60 years
2. Fluent in Indonesia that b aik and true
3. Willing to be the subject of research.
4. Elementary as minimal education.
5. Have a score of MMSE ≥ 17 .
6. Exclusion Criteria:
7. Have a history of substance use.
8. Have a GDS score of ≥ 5 .

3.5. Estimated Sample

Large sample was measured by using the formula:²⁹

$$\frac{(Z_{\alpha} \sqrt{2PQ} + Z_{\beta} \sqrt{P_1Q_1 + P_2Q_2})^2}{P_1 - P_2}$$

= Raw derifat alfa = 1.96 $\alpha = 5\%$, hipotesis of two way

$Z_{\beta} = 1.28$

$\beta = 10\%$

$P_2 =$ proportion of 9.2% disability functional bag = 0.09

$Q_2 = 1 - P_2 = 1 - 0.25 = 0.91$

$P_1 - P_2 =$ difference minimum considered significant proportion = 30%

$P_1 = P_2 + 0.3 = 0.09 + 0.3 = 0.39$

$Q_1 = 1 - P_1 = 0.61$

$P = \frac{P_1 + P_2}{2} = \frac{0.39 + 0.09}{2} = 0.24$

$Q = 1 - P = 1 - 0.4 = 0.76$

$n_1 = n_2 = 27.21 = 28 \rightarrow$ total sample 60

With such a large sample obtained is rounded into 80 subject consisting of 40 men and women 40 people.

3.6. Research tools and methods

3.6.1. Tools and materials

The questionnaire contains questions about demographic characteristics (age, gender, ethnicity, marital status, education level, employment status, Weight, Height) and chronic disease, a history of substance use. Questionnaires *Mini Mental State Examination (MMSE)*, a pretty good examination ts to detect impaired cognition, establish a baseline and monitor reduction and cognition within a certain time. Grades 24-30 = normal, grades 17-23 *probable* cognitive impairment and grades 0-16 = *definite* cognitive impairment. Questionnaires *Geriatric Depression Scale (GDS)*, consisting of 30 items suitable for screening depression. This scale has been extensively validated. This scale is a scale that rated themselves (*self-rating*) with a value of ≥ 5 indicate the possibility of depression.³¹ Questionnaire BI - ADL is a measuring instrument reliable and valid for assessing the functional status of elderly basis consisting of ten items and had an overall score ranging from 0-20 where a score between 0-4 = dependent total, 5-8 = dependent weight, 9 - 11 = medium dependent, 12 - 19 = light dependent, 20 = Independent.

3.6.2. Ways of working

The whole elderly living in Elderly Care Unit Binjai and Medan region who meet the inclusion and exclusion criteria will be included in the study to be fulfilled number of samples. All subjects included in the study gave written approval after a detailed and understandable explanation by the patient. Subjects were also asked to fill in the data clicking Enai demographic characteristics (age, gender, ethnicity, education level) and measurement of blood pressure and blood sugar levels. Then it will be screened to assess cognitive function using *the Mini Mental State*

Examination (MMSE), subjects were included in the study were those who had MMSE scores ¹⁷. Then be screened for depression using the *Geriatric Depression Scale (GDS)* 15 items on subjects included in the study were those who had a score <5. We evaluated the functional status of elderly basis using the *Barthel Index - Activity Daily Living (BI - ADL)*. The examination is done by direct interview to the subject.

3.7. Identify variables

The independent variables: Elderly men and women status assessed with BI - ADL

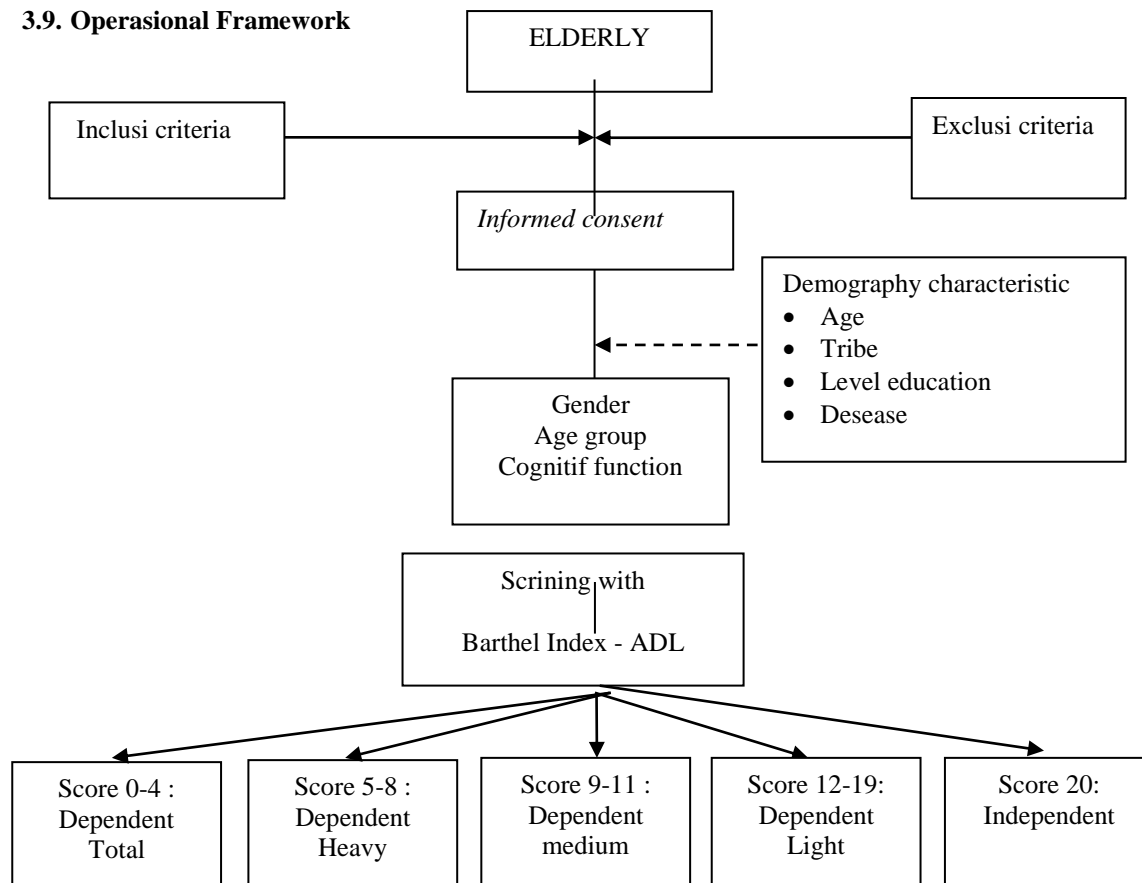
3.8. Operational definition

1. The basic functional status: ket e rampilan basic to possess someone to care for him include, among others, dressing, eating and drinking, toileting, bathing measured using the *Barthel Index of Activities of Daily Living (BI - ADL)* where a score of 0-20 where a score between 0-4 = dependent total, 5-8 = dependent by weight, 9-

11 = dependent medium, 12-19 = dependent mild, 20 = Independent.

2. Elderly: People who have aged 60 years and older Air Service UPT Elderly Binjai Region.
3. Gender is a gender difference differentiated between men and women.
4. Age group: length of life from birth expressed in terms of years. Seniors are divided into groups age 60-65, 66-70 years and > 70 years.
5. The level of education is the last level of education that is rescued by a subject differentiated above.
6. Tribe is a group that has the same cultural background and is divided into non Batak and Batak.
7. Cognitive function refers to the individual's perception, memory, thinking, and reasoning as measured using the MMSE score of 24-30 = normal, grades 17-23 probable cognitive impairment and grades 0-16 = definite cognitive impairment.
8. Elderly with depression is elderly with a GDS score of ≥ 5 .

3.9. Operasional Framework



4. RESEARCH RESULTS

* *Chi-square*

4.1. Demographic Data and Subject

Characteristics

The subjects of the study were 80 people consisting of 40 men and 40 women who were social assistant of elderly UPT of Elderly Social Service of Binjai and Medan region.

TABLE 1. Sociodemographic Characteristics

Characteristics	n (%)	
Gender		
Man	40	(50.0)
Women	40	(50.0)
Age (years)		
60-65	38	(47.5)
66-70	42	(52.5)
Education		
SD	31	(38.8)
SMP	29	(36.3)
SMA	20	(25,0)
Tribe		
Batak	50	(62.5)
Non Batak	30	(37.5)

Source: thesis data, 2014

In Table 1 we can see a picture in which the subject characteristics A total of 42 subjects (52.5%) in the range of 66-70 years old. The tribe of most subjects are Batak tribe that is as much as 50 (62,5%) subject. Most of the subjects (38.8%) had primary school education.

TABLE 2. Differences basic functional status by sex.

variable		Functional status		p
		Independen t	Dependen t	
Gende r	Man	26 (20.8)	14 (11,2)	0,11 5 *
	wome n	19 (15,2)	21 (16,8)	

Table 2 shows that there are 45 subjects with an independent basic functional status and 35 subjects with dependent basic functional status. Of totally 40 male subjects, there were 26 (20.8%) subjects with the basic functional status of Mandiri. In a group of subjects with a female gender of 40 subjects, there were 21 (16.8%) subjects who experienced a dependent base functional status. By using chi square test there was no significant difference for basic functional status by sex ($p = 0,115$, $p > 0,05$).

TABLE 3. Differences in basic functional status by Age Group

variable	Functional status		p	
	Independent	Dependent		
Age group	60- 65	35 (28,0)	3 (2,4)	0,000 *
	66- 70	10 (8.0)	32 (25.6)	

* *Chi Square* In Table 3, the age group 60-65 years there were 35 (28.0%) subjects with a basic functional status independently. While in the age group 66-70 years terdapa 32 (25.6%) with dependent basic functional status. From this data found significant differences in basic functional status by age group ($p = 0.000$, $p < 0.05$).

TABLE 4. Differences in basic functional status based on cognitive function

variable	Functional status		p	
	Independe nt	Depende nt		
Cogniti ve function	Normal	38 (30.4)	6 (4.8)	0,00 0 *
	Probabl e	7 (5,6)	29 (23,2)	

* *Chi Square*

In Table 4, show that in the group of subjects with normal cognitive function are 38 (30.4%) subjects with independent functional status, whereas in the group of subjects with *cognitive impairment is probable* there were 29 (23.2%) with dependent functional status. From the *chi-square* test for significant differences based on cognitive functional status ($p = 0.000$, $p < 0.05$).

5. DISCUSSION

This research is an analytic research with *cross sectional* approach category to see the basic functional status in elderly by gender in UPT of Elderly Social Services Regional Binjai and Medan. Subjects numbered 80 people consisting of 40 men and 40 women inmates who are socially at UPT of Elderly Social Services Regional Binjai and Medan. How sampling is by using *consecutive sampling method*. In this study statistical test used is the *Chi-Square* test of *homogeneity* by *kar ena* does not qualify then tested *Exact Fisher*.

From table 1, based on demographic characteristics obtained characteristics of the subjects in which totally 42 subjects (52.5%) in the range of 66-70 years old. From the demographic characteristics of the study done by Hairi and colleagues in 2010 to look at the prevalence and correlation between physical disability and functional disability in the elderly who live in rural areas of Malaysia obtained a high pitch age group was 60-64 years (37.2%). It also fits the data the elderly in Indonesia that the group aged elderly as the highest totally aged 60-64 years in 2014.^{5,9}

Ethnic groups of research subjects divided into Batak and Non Batak. Where tribes are most subject Batak tribe that as many as 50 (62.5%) subjects. No previous studies on this subject in Indonesia but De Leon and his colleagues, in a study entitled functional disability among elderly blacks and whites in two different areas: New Haven and North Carolina EPESE where the subject of their research as highest is whites (87.1%).¹²

The education level of the most widely on the subject of research is the primary by totally 31 (38.8%) subjects. In this study the subjects included are elementary to university. This contrasts with research carried out by Ortega and his friends in Spain where the elderly are included are elderly people who do not have education up to high school where the education level of the elderly yang most is SD(elementary) (82.65%) and SMP (Junior high school) (14.51%),¹¹ Kaneda and his colleagues in his research entitled education, gender and functional changes in the elderly in Indonesia reported that in some subjects with high school education or more (compared with no education) reduces the risk of

experiencing functional limitations though statistically showed no association significant correlation between level of education and changes in functional status.³⁴

In Table 2 me mperlihatkan found that there were 45 subjects with independent basic functional status and 35 subjects with basic functional status dependent. Of the 40 male subjects, there were 26 (20.8%) subjects with basic functional status Mandiri. In the group of subjects with the female gender who are 40 subjects, there were 21 (16.8%) subjects with basic functional status dependent. By using the chi square test there was no significant difference on the basis of functional status based on gender ($p = 0.115$, $p > 0.05$). This is according to research conducted by Calenti et al entitled prevalence of functional status in *activity daily living (ADL)*, *instrumental activity daily living (ADL)* and factors associated, as a predictor of morbidity and mortality of which 46.5% Dikla to categorize as a standalone, 36.5% with a dependent being, 11.5% with dependent b closely and 5.5% with a total dependent. Overall men have on average much higher against women (6.2 and 5.9), although the difference was not statistically significant ($P = 0.79$).³⁵

In the study conducted by Masqood and colleagues in a study titled risk factors affecting the decline in functional status in elderly in Punjab, Pakistan report that found reductions in status s function in women (58.6%) and men (45.9%), but the results of logistic regression were reported that gender does not influence the decline in functional status ($P = 0.131$).³⁶

In contrast to studies conducted Yong and his colleagues in their study entitled gender differences in health and expectancy of health in the elderly in Singapore: An investigation of disease, decline and functional disability where the difference between functional disability based on sex which most clearly in the age of the higher than 75 years, with a greater proportion of women compared to men. Nearly 17% of women reported having at least one activity that is dependent on the daily activities than men.³⁷

In research Andrade et al entitled gender differences in age life expectancy free of disability in the elderly in Sao Paulo, Brazil. Esti masi load showed that 19.2% of the individuals that had aged

60 years and over in Sao Paulo reported experiencing difficulty in performing at least one ADL. The most common type of dysfunction ADL is the difficulty in dressing and moved from the bed. The prevalence of disability ADL is higher in women (22.3%) than men (14.9%) with a value of $P < .01$.¹⁰

In Table 3 shows that p is no age group 60-65 years there were 35 (28.0%) subjects with a basic functional status independently. While in the age group 66-70 years there exist 32 (25.6%) with basic functional status dependent. From this data found a significant difference in the basic functional status by age group ($p = 0.000$, $p < 0.05$). Ortega and his colleagues in the study who undersign The title prevalence of disability in a mixed population ≥ 75 years in Spain: A screening survey based on the *International Classification of Functioning*, found that the prevalence of functional disability vary across depending on sexuality and age. Individuals who experience functional disability in each group of age was higher in women compared with men. In the group aged 75-79 disability prevalence as a function in women 24.85% and men 15.31% in the group aged 80-84 disability prevalence as a function in women 16.9% and men totally 13.12% in the group aged ≥ 85 years the prevalence of disability 20.87% of men and 8.95%. The prevalence of more severe functional disabilities is higher in individuals that had aged 85 years and over compared with age younger.¹¹

In Table 4, show that in the group of subjects with normal cognitive function are totally 38 (30.4%) subjects with independent functional status, whereas in the group of subjects with *probable cognitive impairment* there were 29 (23.2%) with dependent functional status. From test *chi square* there are significant differences based on the functional status of cognitive function ($p = 0.000$, $p < 0.05$). In the study conducted by Laks and his colleagues reported cognitive impairment and functional observed in 19.2% of the total sample. Status functionally dependent without cognitive impairment was found at 5.3%. Prevalence status functionally dependent deng early cognitive impairment was 20%. This study found there is a relationship that is strong between the status of functional and cognitive impairment (Pearson = 0.737).³⁸

This study has limitations and weaknesses, among others in the study required a larger number of

samples to obtain more accurate data. In addition to the use of a questionnaire to assess the functional status of the elderly should be the basis of direct observation of the everyday activities of the elderly.

CONCLUSIONS

6.1. Conclusion

Overall elderly who have the status of basic functional dependent light in elderly UPT social services advanced age and is 25% where sex Most women by 35% dibanding in men by 15%, statistically not found significant differences in status the basic functional on both men and women. ADL dependent type most common are up and down stairs.

Differences significant basic functional status found in elderly by education level and MMSE scores.

6.2. Suggestion

1. Seeing functional disability in the elderly in social services further UPT age then the government needs to formulate policies, programs and activities to support health status and quality of life of the elderly to be independent, healthy and efficient so as to reduce or even not being a burden to family and community.
2. Need to do research about the factors that affect the basic functional status in elderly so as to reduce the rate of disability in the elderly.

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