

Original article:

Utilization of Comprehensive Geriatric Assessment (P3G) in Primary Health Center at Medan City and Deli Serdang District of North Sumatera Province Indonesia 2018

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Abstract

Introduction: The Ministry of Health of the Republic of Indonesia has issued a guide to Comprehensive Geriatric Assessment (P3G) in 2017, but there is few data regarding its use in health care institutions. The primary primary health center as the spearhead of primary services always receives geriatric patients and should have taken advantage of CGA. **Objective:** To find out the results of using a comprehensive assessment guide for geriatric patients in Medan City Primary health center and Deli Serdang District Primary health center in 2018. **Methods:** Descriptive study with cross sectional design, respondents were elderly who sought treatment in three primary health center such as Sukaramai Primary health centers in Medan City, Bandar Khalipah Primary health center and Tanjung Rejo Primary health center Deli Serdang District from 27 August to 20 September 2018 by determining the number of respondentss using the Slovin method, data collection by questionnaire interviews and data analysis using SPSS. **Results:** A respondents of 120 people were obtained, with an advanced category elderly aged 60-74 years at 90.8%, old aged 75-90 years at 8.3% and very old aged > 90 years at 0.9%. With ADL examination, respondents experienced mild-moderate dependence 60.8%, 37.5% independent, 1.7% heavy dependence. By examining the respondents' IADL 89.2% independently, 0.8% was done by others, 0.8% needed help all the time, and 9.2% needed occasional assistance. By checking the risk of falling, 57.5% of the respondents experienced a low risk, 35% high risk and 7.5% there was no risk. With GDS examination 67.5% of 'respondents had no depression, 32.49% were most likely to have depression. With the Mini-Cog examination 78% of normal respondents, 21.7% suspected cognitive function decreased. With MMSE examination 80.8% of normal respondents, 16.7% of mild cognitive function disorders, and 2.5% of severe cognitive dysfunction. With AMT examination 73.3% of normal respondents and 26.7% of moderate memory disorders. With MNA screening screenings, 66.7% of respondents had no risk, and 33.3% might experience malnutrition and further study was needed. Based on the assessment of advanced MNA 95% risk of malnutrition, and 5.0% malnutrition. **Conclusion:** Elderly people who came to the primary health center most were elderly aged 60-74 years at 90.8%, the highest gender was women at 53.3%, based on the ADL examination, the respondents experienced the most mild-moderate dependence of 57.7%, IADL examination amounting to 89.2% independently did not need assistance, risk checking fell by 57.5% respondents experienced a low risk of falling, GDS examination amounted to 67.5% of respondents had no depression, Mini-Cog examination of 78% of respondents did not experience a decline cognitive function, MMSE examination of 80.8% of respondents did not experience cognitive impairment, AMT examination was 73.3% of respondents did not experience memory impairment, MNA examination of 66.7% did not experience malnutrition.

Keyword: Geriatrics, Elderly, P3G, Primary health center, Ministry of Health

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Introduction

To maintain the elderly to stay healthy and productive socially and economically in accordance with human dignity, health care for the elderly must be held. The Community Primary health center as a

first level health care facility is expected to be able to carry out basic level promotive, preventive, curative and rehabilitative efforts for the elderly.¹ Based on the 2017 National Socio-Economic Survey (Susenas) data, the number of elderly

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people in Indonesia reaches 23.66 million people or 9.03% of the entire population of Indonesia that includes countries with population structures towards the aging or aging population. It is estimated that by 2020 the percentages in Indonesia will reach 27.08 million.² In treating and managing geriatric patients, two important components are included : the team approach and the Comprehensive Geriatric Assessment which is part of comprehensive geriatric management (CGM). The geriatric patient's complete approach is a multidimensional assessment procedure. Multidisciplinary diagnostic instruments are needed to collect medical, psychosocial, functional ability, and limitations of elderly patients.³

The Indonesian government through the Minister of Health has issued a regulation on the implementation of elderly health services at the health center.¹ Research on the comprehensive assessment of geriatric patients which includes eight assessment components is still not widely done in Indonesia, especially in Health center.³

Based on the description above, the researcher is interested in conducting research on the overview of the complete study of geriatric patients in Medan City Primary health center and

Deli Serdang District in 2018.

Method

This type of research is descriptive research with cross-sectional design, with the determination of the number of respondents using the Slovin formula and using the Comprehensive Geriatric Assessment questionnaire instrument. The place of research was conducted at the Sukaramai Primary health center in Medan City, Bandar Khalipah Primary health center Deli Serdang district, Tanjung Rejo Primary health center Deli Serdang district.

The study population was elderly aged ≥ 60 years, who went to the Sukaramai District Health Office in Medan City, Bandar Khalipah Primary health center Deli Serdang district and Tanjung Rejo Primary health center Deli Serdang district on 27 August 2018 to 20 September 2018.

Results

This research was conducted in three places, namely, a.) Sukaramai Primary health center Jl. R. Hakim, Kanti alley No.28, Tegal Sari I, Medan Area, Medan City, North Sumatra 20216, b.) Bandar Khalipah Primary health center Jl. Bandar Khalipah Primary health center, Tembung, Percut Sei Tuan, Deli Serdang District, North Sumatra 20371, c.) Tanjung Rejo Primary health center Jl. Lembaga, Tj. Rejo, Percut Sei Tuan, Deli Serdang district, North Sumatra 20371.

Age frequency distribution

Table 1. Frequency distribution age group

Age	n	(%)
Elderly (60-74 years old)	109	90,8
Old (75-90 years old)	10	8,3
Very old (>90 years old)	1	0,9
Total	120	100

Based on the data above, most of the respondents belong to the elderly category, namely 109 people (90.8%).

Table 2. Frequency distribution age group at Medan City Primary health center and Deli Serdang District Primary health center.

Age	Medan City Primary Health Center		Deli Serdang District Primary Health Center	
	n	(%)	n	(%)
60-74	54	90,0	55	91,7
75-90	5	8,3	5	8,3
>90	1	1,7	-	0
Total	60	100	60	100

Based on the data above, most of the respondents in Medan Primary health center were categorized as elderly, ie 54 people (90.0%). While the majority of respondents in Deli Serdang District Primary health center were categorized as elderly, namely 55 people (91.7%).

Gender frequency distribution

Table 3. Frequency distribution gender

Gender	Frequency	Percentage (%)
Male	56	46,7
Female	64	53,3
Total	120	100

In this study showed that most respondents were female, namely 64 people (53.3%), followed by male respondents was 56 people (46.7%).

Table 4. Frequency distribution gender at Medan City Primary health center and Deli Serdang District Primary health center.

Gender	Medan City Health Center		Deli Serdang District Health Center	
	n	(%)	N	(%)
Male	28	46,7	28	46,7
Female	32	53,3	32	53,3
Total	60	100	60	100

ADL

Table 5. Frequency distribution of ADL

ADL				
Age	Independent n (%)	Mild-Moderate Dependence n (%)	Total Care n (%)	Total %
60-74	42 (38,5)	67 (61,5)	0	100
75-90	3 (30)	6 (60)	1 (10)	100
>90	0	0	1 (100)	100
Total	45 (37,5)	73 (60,8)	2 (1,7)	100

Based on the results of the study, the highest distribution of the level of independence of elderly is the age group of 60-74 years as many as 67 people (61.5%) categorized as mild-moderate dependence.

Table 6. Frequency distribution of ADL Data in Medan City Primary health center.

ADL				
Age	Independent n (%)	Mild-Moderate Dependence n (%)	Total Care n (%)	Total %
60-74	31 (57,4)	23 (42,6)	0	100
75-90	1 (20)	3 (60)	1 (20)	100
>90	0	0	1 (100)	100
Total	32 (53,3)	26 (43,3)	2 (3,4)	100

Based on table 6, the results obtained from 60 respondents in Medan City Primary health center the most categories were in the elderly with the age range 60-74 years the number of 31 respondents (57.4%) was categorized as independent

Table 7. Frequency distribution of ADL Data in Deli Serdang District Primary health center

ADL			
Age	Independent n (%)	Mild-Moderate Dependence n (%)	Total %
60-74	11 (20)	44 (80)	100
75-90	2 (40)	3 (60)	100
>90	0	0	100
Total	13 (21,7)	47 (78,4)	100

Based on table 7, the results obtained from 60 respondents in Deli Serdang District Primary health center the most category was in the elderly with age range 60-74 years as many as 44 respondents (80%) categorized as mild-moderate dependence.

IADL**Table 8. Frequency distribution of IADL**

IADL	N	(%)
Unable to do at all	1	0,8
Need help all the time	1	0,8
Need some help	11	9,2
Independent	107	89,2
Total	120	100

Frequency distribution of instrumental activities of daily living (IADL) shows the highest distribution is independent / independent as many as 107 people (89.2%) in the age range 60-74 years.

Table 9. Frequency distribution of IADL respondents in the City Primary health center Medan

IADL					
Age	Unable to do at all n(%)	Need help all the time n(%)	Need some help n(%)	Independent n(%)	Total n(%)
60-74	0(0)	0(0)	1(1,9)	53(98,1)	54 (100)
75-90	0(0)	1(20)	0(0)	4(80)	5 (100)
>90	1(100)	0(0)	0(0)	0(0)	1 (100)
Total	1(1,7)	1(1,7)	1(1,7)	57(95)	60 (100)

Frequency distribution of instrumental activities of daily living (IADL) in Medan city primary health centers showed the highest distribution was independent / independent as many as 53 people (98.1%) in the age range 60-74 years.

Table 10. Frequency distribution of IADL respondents at Deli Serdang District Primary health center

IADL					
Age	Unable to do at all n(%)	Need help all the time n(%)	Need some help n(%)	Independent n(%)	Total n(%)
60-74	0(0)	0(0)	8(14,5)	47(85,5)	55 (100)
75-90	0(0)	0(0)	2(40)	3(60)	5 (100)
>90	0(0)	0(0)	0(0)	0(0)	0(0)
Total	0(0)	0(0)	10 (16,7)	50(83,3)	60 (100)

Frequency Distribution of instrumental activities of daily living (IADL) at Deli Serdang district primary health centers showed the highest distribution was 47 people (85.5%) in the age range 60-74 years old.

Falling Risk**Table 11. Frequency distribution of falling risk**

Age	Falling Risk						Total (%)
	No Risk		Low Risk		High Risk		
	n	%	n	%	n	%	
60-74	9	7,5	65	54,2	35	29,2	109 (90,8)
75-90	-	-	4	3,3	6	5	10 (8,3)
>90	-	-	-	-	1	0,8	1 (0,8)
Total	9	7,5	69	57,5	42	35	120 (100)

Based on the general data, the risk of falling was obtained by the most respondents in the elderly category with the age range of 60-74 years having a low risk of 65 respondents (54.2%).

Table 12. Frequency distribution of risk of falls in Medan City Primary health center.

Age	Falling Risk						Total (%)
	No Risk		Low Risk		High Risk		
	n	%	n	%	n	%	
60-74	9	15	33	55	12	20	54 (90)
75-90	-	-	2	3,3	3	5	5 (8,3)
>90	-	-	-	-	1	1,7	1 (1,7)
Total	9	15	35	58,3	16	26,7	60 (100)

Based on risk data falling in Medan City Primary health center, most respondents in the elderly category with an age range of 60-74 years had a low risk of 33 respondents (55%).

Table 13. Frequency distribution of the risk of falls in the Deli Serdang District Primary health center.

Age	Fall Risk						Total (%)
	No Risk		Low Risk		High Risk		
	n	%	n	%	n	%	
60-74	-	-	32	53,3	23	38,3	55 (91,7)
75-90	-	-	2	3,3	3	5	5 (8,3)
>90	-	-	-	-	-	-	-
Total			34	56,7	26	43,3	60 (100)

Based on risk data falling in Deli Serdang District Primary health center, most respondents in the elderly category with age range 60-74 years old had a low risk of 32 respondents (53.3%).

GDS**Table 14. Frequency distribution of GDS**

Age	GDS						Total
	Normal		Probable Depression		Indicative of Depression		
	n	%	n	%	n	%	
60-74	75	62,5	34	28,33	0	0	109
75-90	6	5	4	3,33	0	0	10
>90	0	0	1	0,83	0	0	1
Total	81	67,5	39	32.49	0	0	120

Based on general data, the GDS was found to be the most respondents of the elderly category with the age range of 60-74 years without depression, 75 respondents (62.5%)

Table 15. Frequency distribution of GDS in Medan City Primary health center.

Age	Normal		Probable Depression		Indicative of Depression		Total
	n	%	n	%	n	%	
	n	%	n	%	n	%	
60-74	41	68,3	13	21,7	0	0	54
75-90	3	5,0	2	3,3	0	0	5
>90	0	0	1	1,7	0	0	1
Total	44	73,3	16	26,7	0	0	60

Based on GDS data in Medan City Primary health center, there were the most respondents in the elderly category with an age range of 60-74 years without depression, 41 respondents (68.3%)

Table 16. Frequency distribution of GDS in District Primary health centers Deli Serdang.

Age	Normal		Probable Depression		Indicative of Depression		Total
	n	%	n	%	n	%	
	n	%	n	%	n	%	
60-74	34	56,7	21	35,0	0	0	55
75-90	3	5,0	2	3,3	0	0	5
>90	0	0	0	0	0	0	0
Total	37	61,7	23	38,3	0	0	60

Based on GDS data at the Deli Serdang District Community Primary health center, most respondents in the elderly category with an age range of 60-74 years were not depressed, as in 34 respondents (56.7%).

MINI COG**Table 17. Frequency distribution of Mini-Cog**

Age	Normal		Probable cognitive impairment	
	n	%	n	%
60-74	88	80,7%	21	19,3
75-90	6	60,0%	4	40,0
>90	0	0	1	100
Total	94	78%	26	21,7

Based on the general data of the mini-cog, the most respondents in the elderly category with the age range 60-74 years did not experience a decline in cognitive function by 88 respondents (80.7%).

Table 18. Frequency distribution of Mini-Cog in Medan City Primary health centers and Deli Serdang district

Age	Medan city primary health center				Deli Serdang district primary health center			
	Normal		Probable cognitive impairment		Normal		Probable cognitive impairment	
	n	%	n	%	n	%	n	%
60-74	47	87	7	13	41	74,5	14	25,5
75-90	3	60	2	40	3	60	2	40
>90	0	0	1	100	0	0	0	0
Total	50	83,3	10	16,7	44	73,3	16	26,7

Based on the Mini-Cog data of respondents in Medan City Primary health center, most respondents in the elderly category with age range 60-74 did not experience a decline in cognitive function as many as 47 respondents (87%). And at Deli Serdang District Primary health center, most respondents in the elderly category with age range 60-74 years did not experience a decline in cognitive function by 41 people (74.5%)

MMSE

Table 19. Frequency distribution of MMSE

Age	MMSE						Total %
	Normal		Mild Cognitive Impairment		Severe Cognitive Impairment		
	n	%	n	%	n	%	
60-74	91	83.5	17	15,6	1	0,9	100
75-90	6	60	3	30	1	10	100
>90	0	0	0	0	1	100	100
Total	97	80,8	20	16,7	3	2,5	100

Based on MMSE general data, the most respondents in the elderly category with age range 60-74 years did not experience cognitive impairment as many as 91 respondents (83.5%).

Table 20. Frequency distribution of MMSE in Medan City Health Care

Age	MMSE						Total %
	Normal		Mild Cognitive Impairment		Severe Cognitive Impairment		
	n	%	n	%	n	%	
60-74	47	87	6	11,1	1	1,9	100
75-90	3	60	1	20	1	20	100
>90	0	0	0	0	1	100	100
Total	50	83,3	7	11,7	3	5	100

Based on MMSE data, respondents in Medan City Primary health center found that most respondents in the elderly category with the age range 60-74 did not experience cognitive impairment as many as 47 respondents (83.3%).

Table 21. Frequency distribution of MMSE in Primary health centers of Deli Serdang District.

Age	MMSE						Total %
	Normal		Mild Cognitive Impairment		Severe Cognitive Impairment		
	n	%	n	%	n	%	
60-74	44	80	11	20	0	0	100
75-90	3	60	2	40	0	0	100
>90	0	0	0	0	0	0	0
Total	47	78,3	13	21,7	0	0	100

Based on MMSE data, respondents in Deli Serdang District Primary health center found that most respondents in the elderly category with age ranges 60-74 did not experience cognitive impairment as many as 44 respondents (80%).

AMT

Table 22. Frequency distribution of AMT

Age	Normal		Moderate Impairment	
	n	%	n	%
60-74	84	77,1	25	22,9
75-90	4	40,0	6	60,0
>90	0	0	1	100
Total	88	73,3	32	26,7

Based on the results of the AMT study, the highest number of respondents in the elderly category was 60-74 years, 84 people (77.1%) did not experience memory problems.

Table 23. Frequency distribution of AMT in Medan City Primary health center

Age	Normal		Moderate Impairment	
	n	%	n	%
60-74	43	79,6	11	20,4
75-90	2	40	3	60
>90	0	0	1	100
Total	45	75,0	15	25,0

Based on the results of AMT research in Medan City Primary health center, the results of the most respondents were in the elderly category with a range of 60-74 years, as many as 43 people (79.6%) did not experience memory disorders.

Table 24. Frequency distribution of AMT in Deli Serdang District Primary health centers

Age	Normal		Moderate Impairment	
	n	%	n	%
60-74	41	74,5	14	25,5
75-90	2	40	3	60
>90	0	0	0	0
Total	43	71,1	17	28,3

Based on the results of AMT research at Deli Serdang District Primary health center, the results of the most respondents in the elderly category with a range of categories (60-74 years) were obtained, as many as 41 people (74.5%) did not have memory disorders.

MNA

Table 25. Frequency distribution of MNA

Age	Normal Nutritional		At risk of Malnutrition	
	n	%	n	%
60-74	76	69,7	33	30,3
75-90	4	40,0	6	60,0
>90	0	0	1	100
Total	80	66,7	40	33,3

Based on the results of research that has been conducted from 120 respondents, the highest is good nutrition as many as 80 people (66.7%) and possibly malnutrition as many as 40 people (33.3). Based on the age category of respondents, the elderly category ranges from 60-74 years, as many as 76 people (69.7%) have good nutrition.

Table 26. Frequency distribution of MNA Medan City Primary health center

Age	At risk of Malnutrition		Malnourished	
	n	%	N	%
60-74	17	94,4	1	5,6
75-90	3	100	0	0
>90	0	0	1	100
Total	20	90,9	2	9,1

Based on research conducted in Medan City Primary health center, the results of the most categorized respondents were obtained with 60-74 years of category, as many as 17 people (94.4%) may experience malnutrition.

Table 27. Frequency distribution of MNA Deli Serdang District Primary health centers

Age	At risk of Malnutrition		Malnourished	
	n	%	n	%
60-74	15	100,0	0	0,0
75-90	3	100,0	0	0,0
>90	0	0,0	0	0,0
Total	18	100	0	0,0

Based on research conducted at Deli Serdang District Primary health center, the highest number of respondents in the elderly category was obtained with a range of 60-74 years, as many as 15 people (100%) might experience malnutrition.

Discussion**Respondent Characteristics**

This study discusses the socio-demographic characteristics of the elderly, including age and gender. From sociodemography, respondents in Medan City Primary health center and Deli Serdang District found a higher ratio of elderly women than men (53.3 versus 46.7%). The results obtained tend to be close to the data in the population where the ratio of women and men is 55% versus 45%.

Statistics in Indonesia also state that the elderly population above 60 years is dominated by women because it relates to a higher life expectancy. In terms of age, the category of respondents with

age 70 years or more is the age category with the highest number. This is in line with the average life expectancy of elderly in Indonesia in 2014 which is close to 72 years.⁴

In this study based on ADL examination of 120 respondents, the results of the data in the most category were mild-moderate dependence of 73 people (60.8%). This is in line with Kamila's research (2017), with 88 respondents as many as 37 people (42%) categorized as mild-moderate dependence.⁵The results of this study are in line with Prihati's (2017) research where out of a total of 96 respondents, 41 respondents (43%) experienced mild-moderate dependence.⁶

The results of this study are also in line with

Rohaedi's (2016) study, where out of a total of 21 respondents, 15 respondents (72%) experienced mild-moderate dependence.⁷ In general, the physical condition of a person who has entered the elderly has decreased. So that in general will affect the activities of daily life.

This study shows that the level of dependence of the elderly is mostly mild. This condition shows that most need only a little help (minimum care) in fulfilling their care.⁸

When viewed by age category, the elderly category with an age range of 75-90 years, both in Medan City Primary health center and Deli Serdang District Primary health center both show the results of more respondents experiencing mild-moderate dependence as many as 3 respondents (60%) at the health center Medan city and as many as 3 respondents (60%) at the Deli Serdang primary health center. This is in line with Inayah's research (2017) from 53 respondents of old age, as many as 27 respondents (40.3%) categorized as mild-moderate dependence.⁹ According to research Suardana (2012) states that in the elderly with an age range of 75-90 years more experienced a significant decrease in the level of independence compared to the elderly category with the age range 60-74 years.¹⁰

Based on the IADL examination, it was found that Independent / Independent were 107 people (89.2%). While based on the age distribution, the most distribution is in the elderly category, which is 65-75 years. Frequency Distribution of instrumental activities of daily living (IADL) in Medan city primary health centers and Deli Serdang district primary health centers showed the highest distribution was independent of 53 people (98.1%) in the age range 60-74 years and independent as much as 47 people (85.5%) in the age range 60-74 years. Not much different from the research conducted by Kurniawan (2018) in his research showed that the highest distribution was independent of as many as 36 people (67%) and the remaining independent were 18 people (33%). The limited ability of elderly IADL is the limitation of the elderly in meeting their life needs and their care.¹¹

Aging can cause a decline in the ability of the elderly to meet their needs and care for themselves so that the ability of the IADL also decreases.¹² Research conducted by Jerson et al. Showed significant results between age and IADL. There is still a decline in executive functions that affect a person's decision making in carrying out activities

of daily life even though his health status is good.^{12,13}

Based on the examination of the risk of falling in this study, it was found that most of the elderly (60-74 years) were 65 people (54.2%) the risk of falling low. This is supported by Junior (2017) study entitled the relationship between age and daily activities with the risk of falling geriatric outpatient patients where there is a significant low and direct relationship between age and risk of falls.¹⁴ According to Grundstorm, et al the risk of falling in the elderly increases with age where there will be a decrease in bone mass that will affect the function and strength of bones which results in a decrease in the ability to maintain the balance of the human body.¹⁵

In this study more low risk of falling because the respondents in this study were mostly elderly (60-74 years) and this study was conducted on patients who came to seek treatment at Medan and Deli Serdang primary health centers where the majority of patients were still able to walk alone to come seek treatment while in Junior's study (2017) more are at high risk for falls because the respondents in the study is the most aged (76-80 years).¹⁴

Based on the GDS examination, in this study found the most elderly age groups (60-74 years) as many as 75 people (62.5%) no depressive disorders. This high percentage is in accordance with Aryawangsa's research (2016) the incidence of depression-free elderly in Tampaksiring I Primary health center, Gianyar Regency, Bali (76.7%)¹⁶ and Prabhaswari et al study of the incidence of depression in the elderly in the working area of Petang I Public Primary health center in Badung Regency, 2015 (75.6%).¹⁷

In general, the elderly begin to experience setbacks from various aspects, namely physical, psychological, economic and social, which can affect the psychosocial status of the elderly themselves. The discovery of 32.49% of respondents from the results of the study with the conclusion that there is a high likelihood that there is a depressive disorder may be caused by the respondent is an outpatient who came to the primary health center with the aim of treating the disease, because one of the risk factors for depression is the existence of the disease.^{16,18}

One of the factors that support the high number of elderly without depression in this study can be caused by the high number of social activities and interpersonal relationships among fellow citizens.

Where residents work together and interact in daily life. Getting high social and environmental support will make the elderly feel more comfortable and happy, so they can keep them away from the risk of depression.^{17,18,19}

Based on the Mini-Cog examination in this study, the most respondents were the elderly (60-74 years) as many as 88 people (73.3%) did not experience a decrease in cognitive impairment. This study is in line with Mongonsidi (2012) that more respondents in the elderly category with the age range 60-74 years did not experience a decline in cognitive function by 25 respondentss (86.25) of 29 respondentss.²⁰

And the results of this study are also in line with the research conducted by Manurung (2016) that of 53 respondentss, more respondentss did not experience a decrease in cognitive impairment by 34 respondentss (64.2%).²¹ This is because during the study period, respondents who visited Medan City Primary health center and Deli Serdang District Primary health center during the study were more elderly with an age range of 60-74 years.

But this is not in accordance with the theory, which according to theory with increasing age will cause changes in neurotransmitters and cause a decline in cognitive function.²² According to Kalaria, age is the most consistent factor causing a decline in cognitive function in previous studies around the world.²³

And this may occur because in addition to the age factor, there are other factors that can also affect cognitive function such as educational history and other comorbidities.

Based on the MMSE examination, in this study found the most respondents in the elderly category (60-74 years) as many as 91 people (83.5%) did not experience cognitive impairment. This research is in line with the research of Ramadian (2012) that more respondents in the elderly category (60-74 years) did not experience cognitive impairment as many as 26 respondents (86.7%) of 30 respondents.²⁴

However, this research is not in line with Gusti's research (2014) where the highest age category is elderly with an age range of 75-90 years as many as 52 respondents (61.9%).²⁵ This is because during the study period, respondents who visited Medan City Primary health center and Deli Serdang District Primary health center during the study were more elderly with an age range of 60-74 years, and this may occur because in addition

to the age factor, there are other factors that also can affect cognitive functions such as educational history and physical activity levels. According to research conducted by Rasyid (2017) where there is a significant relationship between the level of education and the occurrence of cognitive impairment, the p value <0.05.²⁶

Based on AMT examination in this study, it was found that there were the most elderly age groups (60-74 years) as many as 84 respondents (77.1%) did not experience memory / normal disorders. This research is in line with research conducted by Lumbantobing (1995) In 2020, developing countries older than 80 years will increase by 65% and reach 138%. In these circumstances the incidence of a person becoming senile or dementia is 1% at the age of 75 years and increases to 10% at the age of over 85 years.²⁷

Based on the examination of MNA, in this study were obtained from 120 respondentss included in the category of good nutrition as many as 80 elderly (66.7%) and the risk category of malnutrition as many as 40 elderly (33.3%) of the above results more elderly who belong to the normal nutritional category. this research is not in line with the research conducted by Oktariyani (2012) out of 143 elderly 68 normal nutrition elderly (47.6%) and 75 elderly may experience malnutrition / need further assessment (52.4%) this is based on the respondent's characteristics and the location of the different locations oktariyani research was in a social institution.²⁸

The number of elderly people who are in normal nutrition due to the characteristics of respondents who are dominated by the elderly (60-74) as many as 109 elderly while elderly (75-90) and very old age (> 90) only 11 elderly, because based on the theory of aging can cause changes in intestinal function, ineffective metabolism, homeostasis failure and the presence of risk factors that affect the nutritional status of the elderly such as psychological factors, the presence of disease history and the amount and type of food intake.^{28,29}

Conclusion

Based on the results of research on the Utilization of Comprehensive Geriatric Assessment (CGA) at the primary health center of North Sumatra Province in the case study of 2018, conclusions can be drawn:

1. Respondents in the Medan city primary health center were 83.1% elderly and in Deli Serdang district primary health centers were 91.7%.
2. Respondents of Helath center in Medan City are more female by 49.2% and in Helath center Deli Serdang district by 53.3%.

3. Respondents in the Medan city primary health center and deli serdang district primary health centers are mostly Muslim at 70%.
 4. Results of Activity of Daily Living (ADL) with Barthel Modification Index Instruments on respondents in the urban field primary health centers are more likely to experience mild dependence in the elderly by 38.3% and in the Deli serdang district primary health center at 70.0%.
 5. The results of the instrumental activities of daily living (IADL) Lawton on respondents in the helath center in the field were more independent/ older baths were 88.3% and in the Deli District primary health centers were 78.3%.
 6. Results from Falling Risks of Elderly Patients in respondents in the Helath center Medan field experienced a lower risk in the elderly by 55.0% and in the primary health center Deli Serdang district by 53.3%.
 7. The results of the Geriatric Depression Scale (GDS) in respondents in the Medan city primary health center did not have a higher risk for depression in the elderly at 68.3% and in the Deli srdang district primary health center at 56.7%.
 8. The results of the Mini-Cog and Clock Drawing Test (CDT4) on respondents in the Medan city primary health center did not experience cognitive impairment in the elderly at 78.3% and in the Deli Serdang District primary health center at 68.3%.
 9. The results of the Mini-Mental State Examination (MMSE) on respondents in the Medan city primary health center were less likely to experience cognitive impairment in the elderly at 78.3% and in the Deli Serdang district primary health center at 73.3%.
 10. The results of the Abbreviated Mental Test (AMT) on respondents in the Helath center in Medan City were more likely to experience no memory impairment in the elderly at 71.7% and in the Deli Serdang District Primary health center Serdang at 68.3%.
 11. The results of the Mini Nutritional Assessment (MNA) in respondents in the Medan city primary health center had no more risk of experiencing malnutrition in the elderly 60.0% and in the Deli Serdang district primary health center at 66.7%.
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References

- Peraturan Menteri Kesehatan Republik Indonesia Nomor 67 Tahun 2015 Tentang Penyelenggaraan Pelayanan Kesehatan Lanjut Usia Di Pusat Kesehatan Masyarakat
- Badan Pusat Statistik [Internet]. Data statistik penduduk lanjut usia; 2017 [diakses Agustus 2018]. Diunduh dari: <http://www.bps.go.id>
- Setiati S, Harimurti K, Dewiasty E, Istanti R, Sari W, Verdinawati T. Prevalensi geriatric giant dan kualitas hidup pada pasien usia lanjut yang dirawat di Indonesia: penelitian multisenter. In Rizka A (editor). Comprehensive prevention & management for the elderly: interprofessional geriatric care. Jakarta: Perhimpunan Gerontologi Medik Indonesia; 2013:183\
- Buletin Jendela Data dan Informasi Kesehatan RI, Gambaran Kesehatan Lanjut Usia di Indonesia, Semester 1, hal: 1-32. 2013.
- Kamila A. Hubungan tingkat Activity of Daily Living (ADL) dengan kualitas tidur pada lansia di kelurahan karangan kecamatan laweyan surakarta. Universitas muhammadiyah Surakarta. 2017
- Prihati PA. Hubungan tingkat kemandirian Activity of Daily Living (ADL) dengan kualitas hidup lansia di kelurahan karangasem kecamatan laweyan surakarta. Universitas Muhammadiyah Surakarta. 2017
- Roheadi S, Putri ST, Karimah AD. Tingkat kemandirian lansia dalam Activities Daily Living di panti sosial Tresna Werdha Senja Rawi. Jurnal Pendidikan Keperawatan Indonesia. 2016
- Nugroho W. Keperawatan Gerontik dan Geriatrik Edisi 3. Jakarta. EGC
- Inayah VN. Gambaran tentang kemandirian lansia dalam pemenuhan aktivitas sehari-hari di posbindu Desa Sindangjawa Kabupaten Cirebon. Universitas Islam Negri Syarif Hidayatullah Jakarta. 2017
- Suardana IW. Karakteristik lansia dengan kemandirian aktifitas sehari-hari. Artikerl Penelitian. Denpasar. 2012
- Kurniawan, A. Hubungan Tingkat Kecemasan Dengan Tingkat Instrumental Activites Of Daily Living (IADL) Lansia Dengan Hipertensi Di Helath center Penumping. Fakultas Ilmu Kesehatan Universitas Muhammadiyah Surakarta. 2018
- Jerson L, Elienai MR, Elza RL, Ana L, Maria EV, Claudia S, Elias E. Prevalence of cognitive and functional Impairment in community-dwelling elderly. Arq Neuropsiquiatr 2005;63(2-A):207-212
- Lestari, Widi. Hubungan Antara Status Kognitif Dengan Status Fungsional Lanjut Usia Panti Werdha Di Semarang. Fakultas Kedokteran Universitas Diponegoro. 2013
- Agustin Junior, Nuniek Nugraheni, Novira. 2017. Hubungan antara usia dan aktivitas sehari-hari dengan risiko jatuh pasien instalasi rawat jalan geriatri. Jurnal Penyakit Dalam Indonesia. Vol 4 No.4
- Grundstorm A, Guse C, Layde P. Risk Factors for falls and fall related injuries in adults 85 years of age and older. Arch Gerontol Geriatr. 2013;54(3):421-8
- Aryawangsa AAN dan Ariastuti NLP. 2016. Prevalensi dan Distribusi Faktor Risiko Depresi pada Lansia di Wilayah Kerja Helath center Tampaksiring I Kabupaten Gianyar Bali 2015. ISM 7(1): P12-23.
- Prabhaswari L dan Ariastuti NLP. 2016. Gambaran Kejadian Depresi pada Lanjut Usia di Wilayah Kerja Helath center Petang I Kabupaten Badung Bali 2015. ISM 7(1): P47-52.
- Puspita NPPTP, Westa W dan Ratep N. 2015. Prevalensi Dan Faktor Risiko Depresi Pada Lansia di Desa Selung Kecamatan Kintamani Kabupaten Bangli Tahun 2014. Universitas Udayana: Bali Kusumowardani A dan Puspitosari A. 2014
- Hubungan Antara Tingkat Depresi Lansia Dengan Interaksi Sosial Lansia Di Desa Sobokerto Kecamatan Ngemplak Boyolali. Jurnal Terpadu Ilmu Kesehatan 3(2): P106-214.
- Mongonsidi R, Tumewah R, Kembuan MAHN. Profil penurunan fungsi kognitif pada lansia di yayasan-yayasan manula di kecamatan kawongan. Fakultas Kedokteran Unsrat. 2012
- Manurung CH, Karema W, Maja J. Gambaran fungsi kognitif pada lansia di Desa Koka Kecamatan Tombulu. Jurnal e-Clinic Volume 4 Nomor 2; Juli-Desember; 2016.
- Darmojo RB. Demografi dan epidemiologi populasi usia lanjut dalam: Martono HH, Pranata K, pengarang. Buku ajar boedhi-darmojo geriatri. Edisi ke-4. Jakarta: Balai penerbit fakultas kedokteran universitas indonesia; 2011.
- Kalaria N, Maestre E, Arizaga R, Friendland R,P, Galasko D, Hall K, et all. Alzheimer's disease and vascular dementia in developing countries; prevalence, management, and risk factors. Lancet Neurology 2008; 7: 812-26 [https://doi.org/10.1016/S1474-4422\(08\)70169-8](https://doi.org/10.1016/S1474-4422(08)70169-8)
- Ramadian DA, Maja J, Runtuwenw T. Gambaran Fungsi Kognitif pada Lansia di Tiga Yayasan Manula di Kecamatan Kawangkoan. Fakultas Kedokteran Universitas Sam Ratulangi Manado. 2012Gusti
- S, Ratep R, Westa W. Gambaran Faktor-Faktor yang Mempengaruhi Status Kognitif pada Lansia di Wilayah Kerja Helath center Kubu II Januari-Februari 2014. Fakultas Kedokteran Universitas Udayana. 2014
- Rasyid IA, Safritya Y, Sastri S. Hubungan Faktor Risiko dengan Fungsi Kognitif pada Lanjut Usia Kecamatan Padang Panjang Timur Kota Padang Panjang. Jurnal Kesehatan Andalas. 2017
- Lumbantobing, S.M. Dimensia Symposium Geriatric Update, Jakarta; 1995.
- Oktariyani. Gambaran Status Gizi pada Lanjut Usia di Panti Sosial Tresna Werdha (PSTW) Budi Mulya 01 dan 03 Jakarta Timur. Depok: Fakultas Ilmu Keperawatan Universitas Indonesia; 2012.
- Thomas AJ, Brocklehursts Textbook Of Geriatric Medicine And Gerontology. Churchill Livingstone: London; 2013