



THE IMPACT OF FUNCTIONAL STATUS TO THE RISK OF DEPRESSION IN ELDERLY WITH HYPERTENSION

Isni Hijriana^{1*}, Ismail², Ainal Mardhiah³

¹Departement of Nursing, Sekolah Tinggi Ilmu Kesehatan Jabal Ghafur, Sigli, Jln.Lingkar Keunire, Kabupaten Pidie, 24151, Indonesia

²Departement of Nursing, Poltekkes Kemenkes Aceh, Jl. Soekarno - Hatta, Lagang, Darul Imarah, Aceh Besar, Aceh 23231, Indonesia

³Department of Nursing, Faculty of Medicine, Universitas Malikussaleh, Lhokseumawe 24351, Indonesia
[*hijrianaaisni@gmail.com](mailto:hijrianaaisni@gmail.com)

ABSTRACT

Decreased function that occurs in the elderly is usually related to the disease and its severity, but in the end these various factors will affect the functional abilities and well-being of an elderly person. The purpose of this study was to determine the predictor functional status on the risk of depression in elderly people with hypertension in the Keumala Health Center Work Area. Method: This research is analytic in nature with a cross-sectional study design. The population in this study were all elderly people who suffer from hypertension and are over 60 years old in the working area of the Keumala Health Center, totaling 104 elderly people and the samples in this study were 51 elderly people. The sampling technique is purposive sampling. Data was collected using a questionnaire. Results: the univariate test found that the functional status of the elderly with hypertension was mostly in the partially dependen category, namely 41 respondents (80.4%), the risk of depression in the elderly with hypertension, the majority were in the moderate category, namely 39 respondents (76.5%). The results of the bivariate test showed that there was a relationship between functional status and the risk of depression in the elderly with hypertension at the Keumala Health Center, Pidie Regency (P=0.000). Elderly families can help and accompany patients in improving their functional status so that patients can carry out their daily activities independently so that they can reduce their depression.

Keywords: depression; functional status; hypertension

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INTRODUCTION

Hypertension is the main cause of premature death worldwide. by 2020 around 1.56 billion adults will be living with hypertension. Hypertension kills nearly 8 billion people every year in the world and nearly 1.5 million people every year in the East-South Asia region, and it is estimated that every year 9.4 million people die from hypertension and its complications (World Health Organization, 2020). Hypertension is a major risk factor for morbidity and mortality worldwide. Effective treatment of hypertension can reduce the risk of complications such as stroke, myocardial infarction, congestive heart failure, and death. Patients with hypertension are prone to depression. In addition, patients with comorbid hypertension and mental health disorders are a high-risk population for death related to cardiovascular disease (Ho et al., 2015)

Based on the 2018 Riskesdas the prevalence of hypertension based on the results of measurements in residents aged 18 years was 34.1%, the highest was in South Kalimantan (44.1%), while the lowest was in Papua (22.2%). Hypertension occurs in the age group 31-44 years (31.6%), age 45-54 years (45.3%), age 55-64 years (55.2%) (Kemenkes RI., 2018). International Diabetes Federation (IDF, 2020) states that there are 463 million adults living with diabetes in 2019, which is around 9.3% of the world's population in this age group and the number of deaths from diabetes and its complications is estimated at 4.2 million. The prevalence of diabetes is predicted to increase to 578 million (10.2%) in 2030 and to 700 million (10.9%) in 2045. Long-term management of health conditions, including fall prevention, remains a global public health challenge. 30% of those aged 65 and over fall at least once per year, and the risk of falling increases with age. The cause of falls is multifactorial, associated with several identifiable and modifiable risk factors, including lack of physical activity, and generally, impaired gait and balance and loss of lower extremity strength (Finnegan et al., 2019).

The functional status of the elderly is the ability and behavior of an elderly person in carrying out daily activities (ADL). Impaired functional status, both physical and psychosocial, is an important indicator that becomes a benchmark for the presence of disease in the elderly. Decreased function that occurs in the elderly is usually related to the disease and its severity, but in the end these various factors will affect the functional abilities and well-being of an elderly person. Factors that affect functional status in the elderly are age, physiological health, cognitive function, psychosocial function, stress level (Maidaliza, 2021). In addition to physical problems, the elderly can also experience psychological problems such as depression. Depression experienced by the elderly can occur due to problems with physical or psychological changes that affect functional, cognitive and social status (Ferawati, et al, 2021). Depressive disorder in the elderly is a clinical problem and a general health problem that is still far from medical, social and economic touch. The risk of depression increases in elderly women, especially those with a history of depression, recently lost a spouse, living alone, weak social support, living in long-term care homes, declining health, and functional limitations (Kurniawan, 2017).

Patients with hypertension have physical symptoms which are side effects of antihypertensive medication, lower quality of life, and the possibility of complications, and disruption of roles, thus making sufferers vulnerable to psychological stress, especially depression. Depressive symptoms are a risk factor for hypertension and cause health problems in hypertensive patients (Song et al., 2018). This study is different from previous research, there are several studies that identify depressive factors in the elderly, but there are still few who conduct research on the relationship of patient independence to the occurrence of depression in the elderly with hypertension, so the author wants to examine further the relationship of elderly independence in this case studied with the status function of the elderly on the risk of depression in the elderly with hypertension.

METHOD

This type of research uses analytic research methods with a cross-sectional study design, where this study only looks at the relationship of functional status to the risk of depression in the elderly with hypertension in the working area of the Keumala Health Center with a population of 104 elderly people who experience hypertension. The sampling technique uses a purposive sampling technique, namely a non-random sampling technique where the researcher determines the sampling by specifying special characteristics that are in accordance

with the research objectives. The elderly who were sampled were over 60 years old. Determining the number of samples using the slovin formula was 51 respondents.

The research was conducted in the working area of the Keumala Public Health Center, Pidie Regency. The stages in this study were to first select a sample, then conduct a field survey, and measure the functional status of the elderly along with the risk of depression. The research instrument used in this study was functional status using the Barthel Index questionnaire with measuring results ; independent partial dependence, and total dependence. Measuring the risk of depression using the Beck Depression Inventory questionnaire with the results measuring no depression, Mild, Moderate, and Severe. Statistical tests to measure the relationship or influence between variables use the Chi-Square Test statistical method.

RESULTS

Tabel 1.

Respondents characteristic affecting the functional status on the risk of depression in elderly people with hypertension

Variabel	f	%
Gender		
Male	20	39,2
Female	31	60,8
Age		
Early elderly (60- 69 years old)	41	80,4
Middle elderly (70-79 years old)	8	15,7
Late elderly (>80 years old)	2	3,9
Chronic disease		
Yes	23	45,09
No	28	54,9

Table 1, it is found that the characteristics of the majority of research respondents are aged 60-69 years old Early elderly and majority gender is female 31 respondents (60,8 %), elderly who do not have chronic disease are 28 respondents.

Tabel 2.

Frequency Distribution of Functional Status in Elderly Patients with Hypertension

Functional Status	f	%
Independent	4	7,8
Partial dependency	41	80,4
Total dependency	6	11,8

Table 2 showed that the functional status of the elderly with hypertension was mostly in the partially dependent category, namely 41 respondents (80.4%), while total dependence was 6 respondents (11.8%) and independent 4 respondents (7.8%).

Tabel 3.

Frequency Distribution of risk of depression in Elderly Patients with Hypertension

Risk of Depression	f	%
Mild	10	19,6
Moderate	39	76,5
Severe	2	3,9

Table 3 shows that the risk of depression in the elderly with hypertension is mostly in the moderate category, namely 39 respondents (76.5%), while mild depression is 10 respondents (19.6%) and severe depression is 2 respondents (3.9%).

Table 4.
Frequency Distribution of Relationship between Functional Status and Risk of Depression in Elderly with Hypertension

Functional Status	Risk of Depression						Total	p- value
	Mild		Moderate		Severe			
	f	%	f	%	f	%	f	
Independent	4	100	0	0	0	0	4	100
Partial dependency	6	14,6	35	85,4	0	0	41	100
Total dependency	0	0	4	66,7	2	33,3	6	100

Table 4 shows that The relationship between functional status and the risk of depression in elderly people with hypertension shows that the functional status of elderly people with hypertension in the independent category is mostly at risk of mild depression (100%). Statistical test results obtained p-value = 0.000 <0.05, there is a relationship between functional status and the risk of depression in elderly people with hypertension

DISCUSSION

Increasing the age of the elderly affects the level of dependency of the elderly. In general, the elderly will experience a setback in their biological functions, psychological functions, social functions, and economic functions which cause changes in their quality of life (Sumbara et al., 2019). Factors that affect the quality of life of the elderly are the level of independence that is able to maintain the self-esteem of the elderly so as to increase happiness and satisfaction in the elderly (Hijriana & Yusnita, 2022); (Kusumawardani & Andanawarih, 2018). Daily activities (ADLs) are key in measuring the functional status of the elderly. A decrease in ADLs in the elderly can be caused by several diseases (Sato et al., 2002), one of which is sarcopenia, namely loss of muscle mass which results in a decrease in muscle strength causing weakness in the elderly. This muscle disorder affects the independence and quality of life of the elderly (Dedeyne et al., 2020). In addition, gender also affects the decrease in basic and instrumental activities in the daily life of the elderly, elderly adults are at a higher risk of experiencing a decrease in these activities compared to men, this is because women have a higher life expectancy and tend to have more health problems. more (Carmona-Torres et al., 2019).

Advanced age, history of hypertension, diabetes, stroke, heart disease and cognitive impairment are associated with an increased risk of ADLs inability, the better the prevention and treatment of disease can reduce the risk of ADLs decline (Li et al., 2020). Short sleep duration and lack of movement are also risk factors for disability in daily activities. Other studies have found that poor health, low life satisfaction and depression are strong risk factors for requiring one or more ADLs/IDLs (Storeng et al., 2018). Prevalence of chronic disease in an aging population is increasing, , a study in china, This prospective study included 17,707 adults aged ≥45 years from China Health and Retirement Longitudinal studies were used to estimate the relationship between chronic disease, multimorbidity, and depression among middle-aged and elderly adults in China, Depressive symptoms were assessed using 10 items Center for Epidemiological Studies Depression Scale Questionnaire (CES-D-10). Two chronic physical conditions, include hypertension, diabetes, dyslipidemia, cancer, chronic lung disease, liver disease, heart failure, stroke, kidney disease, arthritis or rheumatism, asthma, digestive disease were assessed. 12 chronic physical conditions, and significant multimorbidity related to depression. Mobility problems and chronic pain were more than 30% associated with chronic conditions, with a high proportion of strokes (51.56%) and cancer (51.06%) in mobility problems and cancer (53.35%) in chronic pain. Limited activity daily living (ADL) explained 34.60% of the stroke-cancer relationship, while sleep problems

explained between 10.15% (stroke) and 14.89% (chronic pulmonary disease) of the association. Individuals with chronic or multimorbid illnesses are significantly more likely to experience depression. Functional symptoms involving ADL limitations and mobility difficulties are largely mediated between chronic disease and depressive events. These symptoms could be the target of interventions to improve the incidence of depression among individuals with chronic depression Condition (Jiang et al., 2020)

Chronic illness is associated with depressive symptoms in older adults. research conducted by (Chen et al., 2021) which examines the role of instrumental activities of daily life and the role of area of residence in the relationship between chronic disease and depression shows that chronic disease is positively correlated with depression, and negatively correlated with activity instruments of daily living (IADLs). In addition, IADL affects the relationship between chronic disease and depression. In addition, the area of residence (rural/urban) also influences the relationship between IADL and Depression, so that this negative relationship is stronger with older adults living in rural areas than urban areas. Elderly who have hearing loss have the potential to increase depression, 1.47 greater than the elderly who do not experience hearing loss. Elderly people with hearing loss tend to experience emotional and social loneliness. Hearing is related to body balance. When hearing is disturbed, body balance is also disturbed, making it difficult for the elderly to complete their daily activities (Lawrence et al., 2020). Psychological distress in the elderly is also associated with weakness caused by decreased cognitive function(Jing et al., 2020; Jayakody, 2018; Loughrey et al., 2018).

Measurable surveys assess sociodemographic factors, health status, and health behaviors that are conducted with people aged 65 or over who live alone Those who live alone report higher rates of depressive symptoms than those who live with other people depressive symptoms described by the 13 variables was 18.1% for those living alone compared to 23.7% for those living with other people. Compared with health behavior, sociodemographic factors and health status explains more depressive symptoms, particularly psychiatric disorders, pain, and functional impairment risk factors alcohol, alcohol abstinence, physical activity, and social activity were associated with more depression symptom. Living settings influence the relationship between depressive symptoms and individual health behaviors, except for physical activity (Kim et al., 2018) Another factor related to depression in the elderly is the role of social partition, a study shows that there is relationship between pattern of multimorbidity and depression. multimorbidity groups without social participation have an increased risk experiencing depression, this is caused by them alone in dealing with their illness without the support of others so that it has psychological consequences (H. E. Ho et al., 2023). Quantity and pattern of physical activity associated with depressive symptoms in community-dwelling adults. Population-level interventions should promote community life older adults for increase physical activity in order to reduce depression risk. Physical activity (PA) is beneficial in reducing depression risk. Physical activity carried out must pay attention to the intensity, frequency, frequency, volume, and type of physical activity. (Liang et al., 2021)

CONCLUSION

Older people will experience a gradual decrease in body functions until the end of their lives and cause independence in carrying out daily activities so that they become dependent on other people. In the elderly there is weakness on the sides of the body so that, in carrying out daily activities they become limited and experience dependence or assistance from other people so that the elderly feel helpless and the risk depression.

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