

Quality of Life of Hypertensive Patients Aged 40 and Older in Ea M'ngang Commune, Cu M'gar District, Dak Lak Province in 2024

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Abstract— Hypertension - a chronic non-communicable disease often dubbed the “silent killer”. Currently, with its high prevalence, age-related increase, and persistent chronic effects on various organs, particularly the cardiovascular system, the disease significantly deteriorates patients' quality of life. Therefore, the quality of life (QoL) of hypertensive patients is becoming a top concern for the community. This study was conducted to determine the QoL score of hypertensive patients and identify factors related to their QoL among individuals aged 40 and older in Ea M'ngang commune, Cu M'gar district, Dak Lak province in 2024. **Subjects and Methods:** A cross-sectional descriptive study was conducted on 275 hypertensive individuals aged 40 years or older residing in Ea M'ngang commune during the research period. **Results:** 68.7% were aged 60 and older; female/male ratio was 1.6/1; 61.8% had normal BMI; 17.8% had less than primary education; 94.5% lived with family; 45.1% were still working; 52.4% were financially independent; 43.6% self-rated their income as low; 94.9% had health insurance; 20.7% considered hypertension treatment a burden; 63.3% did not undergo regular health checkups; 64% did not regularly monitor blood pressure; 51.3% had hypertension for less than 5 years; 72.4% had stage I hypertension; 22.2% were non-adherent to treatment; 78.9% did not record their blood pressure; only 12.7% monitored blood pressure daily 52.7% experienced stress or insomnia; 77.1% did not exercise; 21.5% smoked; 23.3% consumed alcohol. Over 90% reported regular communication and emotional sharing with others; only 14.9% participated in social activities. The mean QoL score was 0.8709 ± 0.1693 , with the EQ VAS score group of 81–90 points being the most common. There was a significant association between QoL and variables including age group, gender, education level, occupation, income source and level, treatment burden, duration and severity of hypertension, comorbid conditions, stress/insomnia, alcohol use, and social participation. **Conclusion:** The QoL score was 0.8709 ± 0.1693 , and hypertension silently reduces patients' quality of life. Therefore, it is essential that healthcare professionals and local authorities implement comprehensive and appropriate interventions and that patients also engage mentally and physically to improve their own health and well-being.

Keywords— Hypertension, quality of life, Cu M'gar District.

I. INTRODUCTION

Hypertension is the leading cause of death, and its prevalence increases with age [9]. Although it is a silent disease, it significantly impacts the quality of life of patients - particularly older adults because aging combined with hypertension is a major risk factor for stroke, coronary artery disease, and increased mortality [3], thus becoming a burden on both families and society. Therefore, the quality of life (QoL) of individuals with hypertension has become a central concern for

the entire community, with numerous studies both domestically and internationally analyzing this issue [5], [11], [1], [12]. In order to contribute useful data that can support management, treatment, and healthcare services for hypertensive patients in Ea M'ngang commune in particular and Dak Lak province in general, we conducted the study titled “Quality of life of hypertensive patients aged 40 and older in Ea M'ngang Commune, Cu M'gar District, Dak Lak Province in 2024.”

II. OBJECTIVES

- (1) To determine the quality of life score of hypertensive patients aged 40 and older in Ea M'ngang commune, Cu M'gar district, Dak Lak province in 2024.
- (2) To identify factors associated with the quality of life of hypertensive patients aged 40 and older in Ea M'ngang commune, Cu M'gar district, Dak Lak province in 2024

III. RESEARCH METHODOLOGY

A. Study design

A cross-sectional descriptive study with analytical components.

B. Sample

Using systematic random sampling, the minimum required sample size was 265 participants.

Sampling criteria:

Participants aged 40 years and older, listed in the hypertension patient registry, currently residing in Ea M'ngang commune, Cu M'gar district, Dak Lak province, and voluntarily agreeing to participate and provide information for the study.

C. Data Processing

SPSS version 21.0 was used to analyze the data after the survey forms were cleaned and discarded if they didn't adhere to the inclusion criteria.

D. Approval

The study was conducted on a voluntary basis and did not cause harm to participants. All participants were thoroughly informed. Personal information was kept strictly confidential and used solely for scientific research purposes.

IV. RESULT AND DISCUSSION

A. Demographic characteristics of the study participants

TABLE I: Demographic distribution

	Content	Frequency	Rate(%)
Age	< 60 years	86	31,3
	≥ 60 years	189	68,7
Gender	Male	105	38,2
	Female	170	61,8
Education Level	Below primary school	49	17,8
	Primary/Secondary/High School	205	74,5
	College/University	21	7,6
BMI	Normal	170	61,8
	Abnormal	105	38,2
Marital Status	Single	15	5,5
	Living with family	260	94,5

The proportion of people ≥ 60 years old accounted for 68.7%, higher than the prediction for Vietnam in 2040 of 20.7% [10]; female/male ratio was 1.6/1. Normal BMI accounted for 61.8%; education level below primary school accounted for 17.8%, and education level from primary school to high school accounted for the highest proportion. Most of people lived with their family (94.5%).

TABLE II: Economic characteristics of the research subjects

	Content	Frequency	Rate(%)
Occupation	Currently employed	124	45,1
	Retired	151	54,9
Income	Sources have income sources	144	52,4
	Dependent on others	131	47,6
Income Level	Low income	120	43,6
	Average income	155	56,4
Economic burden of hypertension	No perceived burden	218	79,3
	Economic burden	57	20,7
Health insurance	No	14	5,1
	Yes	161	94,9

Nearly half of the study subject still have to work to earn income, 52.4% do not depend on others for income, and 43.6% self-assess their income as low. This rate is higher than the poverty rate of the whole Dak Lak province in 2022, which is 10.94% [4]. Most ethnic minorities have health insurance (94.9%), and 20.7% consider hypertension treatment a burden.

B. Health status of the study participants

TABLE III: Hypertension-related characteristics

	Content	Frequency	Rate(%)
Duration of hypertension	< 5 years	141	51,3
	≥ 5 years	134	48,7
Hypertension stage	Stage I	199	72,4
	Stage II	63	22,9
	Stage III	13	4,7
Types of medications used	None	48	17,4
	One type	218	79,3
	Two or more types	9	3,3
Hypertension status	Controlled/Monitored	163	59,3
	Unknown/Unclear	112	40,7

The rate of hypertension under 5 years is 51.3%, equivalent to the study in Binh Thuan in 2023 of 47.53% [11]; the group of people with grade I hypertension accounts for the highest rate of 72.4%; the rate of hypertension treatment with 1 type of drug

accounts for 79.3%, indicating that blood pressure is controlled in 59.3%.

TABLE IV: Health status characteristics of study subjects

	Content	Frequency	Rate(%)
Chronic disease	No	130	47,3
	Yes	145	52,7
Stress/Insomnia at night/Daytime sleepiness	Never	145	52,7
	Stress/Insomnia	130	47,3

The rate of patients without concomitant chronic diseases is quite positive (47.3%), the group of people with stress and insomnia accounted for nearly half of the total, equivalent to the study in Ho Chi Minh City in 2023 of 50% [2].

C. Health behaviors of the study participants

TABLE V: Characteristics of health examination behavior of research subjects

	Content	Frequency	Rate(%)
Regular health check-up	No	174	63,3
	Yes	101	36,7
Blood pressure check	No	176	64
	Yes	99	36
Timing of blood pressure checks	Daily	35	12,7
	When feeling tired	71	25,8
	During medical visits	169	61,5
Blood pressure note	No	217	78,9
	Yes	58	21,1
Adherence to blood pressure medication	No	61	22,2
	Yes	214	77,8

The results showed that the research subjects did not really care about their own health. Specifically, 63.3% of the respondents did not have regular health check-ups and 64% of the respondents did not check their blood pressure regularly. They mostly only measured their blood pressure when going to the doctor (61.5%), hardly recorded their blood pressure readings for monitoring (78.9%), and 22.2% did not control their blood pressure.

TABLE VI: Behavioral and lifestyle characteristics of research subjects

	Content	Frequency	Rate(%)
Exercise	No	212	77,1
	Yes	63	22,9
Smoking	No	216	78,5
	Yes	59	21,5
Currently smoking	Currently smoking	34	12,4
	Former smoker	25	9,1
Alcohol consumption	No	211	76,7
	Yes	64	23,3
Frequency of drinking	Frequent	24	8,7
	Occasional	40	14,5

The results of table VI show that 77.1% do not exercise, 21.5% smoke, and 23.3% drink alcohol.

D. Social connection characteristics of the research subjects

TABLE VII: Social connection characteristics of the research subjects

	Content	Frequency	Rate (%)
Communication with others	No	25	9,1
	Yes	250	90,9
Emotional sharing	No	27	9,8
	Yes	248	90,2
Participation in social activities	No	234	85,1
	Yes	41	14,9

The number of people participating in social activities accounts for only 14.9%; almost all subjects communicate and share with people around them.

E. Quality of life scale

TABLE VIII. Quality of life in the area of mobility

Content	Frequency	Rate (%)
No difficulty	167	60,7
Slight difficulty	76	27,6
Moderate difficulty	27	9,8
Severe difficulty	4	1,5
Unable to walk	1	0,4
Average score	1,53 ± 0,761	

The self-mobility domain showed that the level of walking without difficulty accounted for the highest proportion (60.7%) and the average score was 1.53±0,761.

TABLE IX. Quality of life in the self-care domain

Content	Frequency	Rate (%)
No difficulty	218	79,3
Slight difficulty	43	15,6
Moderate difficulty	10	3,6
Severe difficulty	3	1,1
Unable to perform self-care	1	0,4
Average score	1,28 ± 0,619	

For the self-care domain, the level of self-care without difficulty accounted for the highest proportion (79.3%), and the average score was 1.28±0,619.

TABLE X. Quality of life in the area of routine activities

Content	Frequency	Rate (%)
No difficulty	195	70,9
Slight difficulty	63	22,9
Moderate difficulty	13	4,7
Severe difficulty	3	1,1
Unable to perform self-care	1	0,4
Average score	1,37 ± 0,662	

In the area of daily living, the level of no difficulty accounted for the highest percentage (70.9%), and the average score was 1.37±0,662.

TABLE XI. Quality of life in the area of pain and discomfort

Content	Frequency	Rate (%)
No pain/discomfort	155	56,4
Slight pain/discomfort	96	34,9
Moderate pain/discomfort	21	7,6
Severe pain/discomfort	3	1,1
Extreme pain/discomfort	0	0
Average score	1,53 ± 0,685	

For the pain and discomfort domain, the level of no pain accounted for the highest proportion (56.4%), and the average score was 1.53±0.685.

TABLE XII. Quality of life in the area of sadness and anxiety

Content	Frequency	Rate (%)
Not anxious/depressed	180	65,5
Slightly anxious/depressed	73	26,5
Moderately anxious/depressed	18	6,5
Severely anxious/depressed	4	1,5
Extremely anxious/depressed	0	0
Average score	1,44 ± 0,683	

For the anxiety/depression domain, no anxiety accounted for the highest proportion (65.5%), and the average score was 1.44±0.683.

TABLE XIII. Patient self-assessment of quality of life

EQ VAS	Frequency	Rate (%)
50-60	19	6,9
61-70	31	11,3
71-80	77	28
81-90	105	38,2
91-100	43	15,6

For EQ VAS scores above 50 points, the group with scores from 81 to 90 points accounted for the highest proportion (38.2%). This is higher than the survey in Ethiopia with 69 points [7].

TABLE XIV. Quality of life

Quality of life score	Minimum score	Average score ± SD	Maximum score
EQ – 5D – 5L	-0,35	0,8709 ± 0,1693	1

The quality of life score (EQ 5D 5L) of the study subjects was 0.8709 ± 0.1693. There is a similarity in the results with the study in Shaanxi at 0.87 [13]; However, it is lower than the study in Hong Kong at 0.881 [12] and higher than the study in Indonesia at 0.83 [1]. The reason for this difference may be that the time, cultural and socioeconomic we conducted the study compared to the authors was different. In addition, the authors' study used a separate country-specific quality of life score measurement coefficient, which is different from this study using a coefficient for Vietnamese people.

F. Some factors related to the quality of life of people with hypertension.

TABLE XV. Correlation between quality of life scores and demographic characteristics of the study subjects

Characteristic	Score EQ-5D 5L	p
	Median	
Age		
< 60	1 (0,89 - 1)	<0,001
≥ 60	0,87 (0,74 - 1)	
Gender		
Male	1 (0,81 - 1)	0,0027
Female	0,89 (0,78 - 1)	
Education level		
Below primary school	0,78 (0,68 - 0,92)	<0,001
Primary/Secondary/High school	0,94 (0,8 - 1)	
College/University	1 (0,93 - 1)	
Living with family	0,93 (0,78 - 1)	

There is a relationship between age, gender, and education level with the QoL score. Similar to the results of the study in Shaanxi the QoL score decreased significantly with increasing age [13]. The explanation for the relationship between QoL and gender is that most of the housework tasks are undertaken by "old ladies"; moreover, women have low tolerance, are vulnerable so they have lower QoL scores. In addition, education level will affect QoL through social status, economic conditions, ability to find accurate information, and physical health concerns.

TABLE XVI. Correlation between quality of life scores and economic characteristics of the study subjects

Characteristic	Score EQ-5D-5L	p
	Median	
Occupation		
Currently employed	1 (0,92 – 1)	<0,001
Retired	0,85 (0,69 – 1)	
Income		
Sources have income sources	1 (0,92 – 1)	<0,001
Dependent on others	0,81 (0,69 – 1)	
Income level		
Low income	0,85 (0,725 – 1)	0,0011
Average income	0,94 (0,84 – 1)	
Economic burden of hypertension		
No perceived burden	0,94 (0,8 – 1)	<0,001
Economic burden	0,8 (0,69 – 0,92)	
Health insurance		
No	1 (0,78 – 1)	0,194
Yes	0,92 (0,78 – 1)	

There was a relationship between the QoL score and working status. The people who were still working to earn income had a higher QoL score. Economic poverty and dependency were associated with the QoL of hypertensive patients, similar to a study in Ba Vi that found the higher-income group had a better QoL score than the other group [6].

TABLE XVII. Correlation between quality of life scores and blood pressure status of study subjects

Characteristic	Score EQ-5D-5L	p
	Median	
Duration of hypertension		
< 5 years	1 (0,85 – 1)	<0,001
≥ 5 years	0,85 (0,69 – 1)	
Hypertension stage		
Stage I	0,94 (0,8 – 1)	0,0059
Stage II	0,89 (0,69 – 1)	
Stage III	0,87 (0,75 – 0,92)	
Types of medications used		
None	1 (0,84 – 1)	0,1106
One type	0,92 (0,78 – 1)	
Two or more types	0,93 (0,85 – 1)	
Hypertension status		
Controlled/Monitored	0,92 (0,78 – 1)	0,3558
Unknown/Unclear	0,93 (0,78 – 1)	

The level of hypertension and the time spent “living with the disease” is also directly proportional to the decline in the patient’s quality of life, similar to the QoL study in Indonesia in 2024 [1].

TABLE XVIII. Correlation between quality of life and health status of study subjects

Characteristic	Score EQ-5D-5L	p
	Median	
Chronic disease		
No	1 (0,92 – 1)	<0,001
Yes	0,8 (0,69 – 0,93)	
Stress/Insomnia at night/Daytime sleepiness		
Never	1 (0,87 – 1)	<0,001
Stress/Insomnia	0,815 (0,69 – 1)	

Patients with one of the following diseases all affect the quality of life score. Chronic diseases will last and affect almost

the rest of the patient's life, and this is also an issue that needs to be concerned about the quality of life of the elderly. In addition, sleep disorders can cause high blood pressure the next morning as well as a state of mental and physical fatigue, in addition to increasing the rate of cardiovascular events and death [8].

TABLE XIX. Correlation between quality of life scores and health check-up behavior of research subjects

Characteristic	Score EQ-5D-5L	p
	Median	
Regular health check-up		
No	1 (0,78 – 1)	0,0862
Yes	0,87 (0,78 – 1)	
Timing of blood pressure checks		
When feeling tired	0,93 (0,78 – 1)	0,5901
During medical visits.	0,93 (0,82 – 1)	
Daily	0,92 (0,78 – 1)	

No association was noted between health check-up behavior and QoL scores.

TABLE XX. Correlation between quality of life scores and lifestyle behaviors of research subjects.

Characteristic	Score EQ-5D-5L	p
	Median	
Exercise		
No	0,92 (0,78 – 1)	0,446
Yes	0,94 (0,79 – 1)	
Smoking		
No	0,92 (0,78 – 1)	0,068
Yes	1 (0,8 – 1)	
Alcohol consumption		
No	0,92 (0,75 – 1)	<0,001
Yes	1 (0,92 – 1)	

There is a correlation between the QoL score and alcohol consumption, similar to a study in Ethiopia that found the QoL score of the non-drinking group was lower than the QoL score of the drinking group [7]. However, the aspect of alcohol use cannot be a factor that needs to be focused on to improve the QoL of hypertensive patients.

TABLE XXI. Correlation between quality of life scores and social connections of study subjects

Characteristic	Score EQ-5D-5L	p
	Median	
Communication with others		
No	0,92 (0,78 – 1)	0,446
Yes	0,94 (0,79 – 1)	
Participation in social activities		
No	0,92 (0,75 – 1)	<0,001
Yes	1 (0,92 – 1)	

There is a relationship between participation in social activities and QoL scores, because participation in social activities is not only a time for people to relax but also the hours of participating in common activities help people escape from loneliness in old age.

V. RECOMMENDATIONS

Local authorities need to pay more attention and have appropriate strategies for people over 60 years old, female, with

low education levels, retired, with poor economies, having had hypertension for more than 5 years, diagnosed with severe hypertension, having many comorbidities, and not participating in social activities. At the same time, families need to cooperate by improving the physical and mental lives of their loved ones, all towards a common goal of improving the quality of life of hypertension patients.

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