The relationship of anxiety, nutritional status, and independence with quality of life of hypertension elderly in the work area of Bukit Hindu Puskesmas, Palangka Raya City

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Abstract

Aim: This study analyzed the relationship between anxiety, nutritional status and independence, and the Quality of Life (QoL) of the elderly with hypertension in the Bukit Hindu Public Health Center, Palangka Raya City.

Methodology: This study used a cross-sectional method in the work area of Bukit Hindu Public Health Center, Palangka Raya City. This study had 40 respondents who were taken by purposive sampling. Data were analyzed by chi-square test and multiple logistic regression tests.

Findings: There is no significant relationship between anxiety and the QoL of the hypertensive elderly in the physical, psychological, social, and environmental domains; the nutritional status variable has a significant relationship with the QoL of the hypertensive elderly in the environmental domain. There is a relationship between independence and the QoL of the elderly with hypertension in the physical, psychological, social, and environmental domains in the Bukit Hindu Public Health Center, Palangka Raya City. The independent variable is the most dominant factor that affects the QoL of the elderly with hypertension in the physical, psychological and social relationships. In contrast, the QoL for the elderly with hypertension in the environmental domain is the nutritional status.

Implications/Novel Contribution: The results of this study are expected to contribute to increasing knowledge and potentially be used as references for further research.

Keywords: Anxiety, Nutritional Status, Independence, QoL, Elderly, Hypertension.

INTRODUCTION

The world is undergoing a major demographic shift due to falling birth rates and increasing life expectancy, leading to an increasing proportion of older people (Silva e Farias et al., 2020). As a result, there is a high probability that the elderly will face irreversible health problems and a decreased functional capacity. Therefore, Health-Related Quality of Life (HRQoL), which consists of the perception of physical and mental health and its relationship to health risks and conditions, functional status, social support, and socioeconomic position, is one of the most serious challenges facing the elderly today (Ran et al., 2017). QoL, is defined by the World Health Organization (WHO) as a person's opinion about their position in society as well as a person's mind of their situation in the culture and value system in which the individual lives and concerning their goals, expectations, standards, and concerns (Mi-Youn, 2019; Rizal et al., 2022).

According to the findings of various studies, the population's overall QoL declines with age. With age, a person experiences a decrease in physical and mental function, leading to a decrease in the QoL. Therefore, they will likely suffer various health problems with age (Rizal et al., 2022; Rerkklang, 2018). People with high blood pressure, often referred to as hypertension, almost always have a lower QoL than people with normal blood

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pressure. According to Soni, Porter, Lash, and Unruh (2010), if a person's QoL decreases, it will affect the treatment and prevention of problems. These complications can cause a person's QoL to fall (Soni et al., 2010; Shahbaz, Sherafatian-Jahromi, Malik, Shabbir, & Jam, 2016). When older people have hypertension, the operation of their body systems can affect their QoL, ranging from mild to moderate to severe, depending on the severity of hypertension (Saftarina & Rabbaniyah, 2016).

Based on the results of Health Research and Development Agency (2018), The prevalence of hypertension in Central Kalimantan Province was 59.07 percent at the age of 55-64 years, 64.71 percent at the age of 65-74 years, and increased to 72.51 percent at the age of 75 years and older. This percentage is based on the measurement results according to the characteristics of each age group (Health Research and Development Agency, 2018). Uncontrolled hypertension can lead to various adverse health effects, including organ damage, heart attack, stroke, kidney disease, and blindness (Jam, Akhtar, Haq, Ahmad-U-Rehman, & Hijazi, 2010; Widiana & Ani, 2017). According to Health Research and Development Agency (2018), the prevalence of stroke based on a doctor's diagnosis in the population according to the characteristics of the age 55-64 years is 49.06 percent and increases by 60.75 percent at the age of 65-74 years and increases at the age of 75+, which is 81.27 percent. This is based on the population according to the characteristics of the age 55-64 years.

Meanwhile, the prevalence of chronic kidney failure according to the characteristics of the 55-64 years and 65-74 years in Central Kalimantan Province was 0.97 and 0.57 percent, respectively, and increased at the age of 75+ years by 1.20 percent. This information is based on the doctor's diagnosis. The percentage of people undergoing hemodialysis was 16.41 percent among those aged 55 to 64, while this figure increased to 7.72 percent for those aged 75 and over (Health Research and Development Agency, 2018).

According to the integrated surveillance data of non-communicable diseases collected at the Bukit Hindu Health Center in 2020, the number of older people with hypertension who checked their health at the puskesmas was 515 people; the number of elderly who had a stroke was 0 (0 percent); and the elderly who suffer from chronic kidney disease as many as 18 people (3.49 percent); but in 2021 the number of older people with hypertension who what examined at the puskesmas decreased to 302; the number of elderly (2.98 percent).

According to Gabriel and Bowling (2004), A person's QoL can be influenced by various aspects, including physical health, mental health, social support, environment, family function, chronic disease (drug use), economic position, and nutritional status (Gabriel & Bowling, 2004). According to Meiner (2006), age, gender, physical illness, economy, spirituality, sleeplessness, and level of independence all impact a person's QoL (Meiner, 2006; Waheed, Klobas, & Ain, 2020).

It is much more common for older people to suffer from anxiety problems than depression. However, the elderly are susceptible to several psychological issues, the most common of which are feelings of isolation, melancholy, hopelessness, and anxiety (Annisa & Ifdil, 2016).

The state or condition of a person is referred to as "nutritional status" caused by the consumption of nutrients from food. Food intake is not the only factor leading to nutritional problems; disease and infection are other potential contributors. Even if a person consumes the right amount of food every day but still suffers from an illness or infection, their nutritional status will suffer as a result (Leo & Kedo, 2021).

The level of independence possessed by an older person to maintain his self-esteem to increase the level of pleasure and satisfaction in his life may affect the QoL of an older person. Furthermore, suppose early preventive measures are not taken. In that case, a higher percentage of seniors will be affected by the decline in their functional abilities, which will accompany various health problems that can cause difficulties. It is feared that this condition will cause the elderly to become dependent on carrying out daily activities; it can also affect the QoL of the elderly; As a result, the elderly will need assistance, and this will be a significant social and economic burden on families, communities, and countries.

The QoL of the elderly with hypertension, especially anxiety, nutritional status, and independence, is an important reason to conduct this study; this is indicated by the many studies that report results with different OR values, the highest of which is on this topic. That's why the researchers wanted to prove and study more deeply "The Relationship of Anxiety, Nutritional Status and Independence with QoL for Elderly Hypertension in the Bukit Hindu Public Health Center in Palangka Raya City."

METHOD

This study analyzed the relationship between the independent variable (also known as risk) and the dependent variable (also known as the effect variable) through quantitative methodologies and analytic observation. Utilizing a cross-sectional design is the approach taken for this project. The participants in this study were older people with hypertension and domiciled in the area served by the Bukit Hindu Public Health Center, Palangka Raya City. Purposive sampling is the method used to collect data for this research. The sampling method aims to consider or base the decision on certain factors or criteria.

The formula used is:

$n = \frac{z^2_{1-\alpha/2}p(1-p)}{d^2}$

Information

n = Sample Size

Z 2 1-/2 = 95

p = Proportion of incidence prevalence

d = Precision set

RESULTS AND DISCUSSION

The presentation of the data in this study was measured using tables and written descriptions of the analysis obtained from the measurement results and the results of filling out questionnaires through interviews by researchers.

Univariate Analysis

Characteristics of respondents

Frequency distribution of respondents based on age, gender, and education.

Table 1: Characteristics of respondents

Characteristics	*n*	%
Age		
60 – 64 years old	17	42,5
65 – 69 years old	9	22,5
70 – 74 years old	14	35
Total	40	100
Gender		
Man	7	17,5
Woman	33	82,5
Total	40	100
Education		
Did not finish elementary school	0	0
Primary school	17	42,5
Junior high school	7	17,5
Senior High School/Vocational	10	25
High School Diploma III	1	2,5
Bachelor degree	5	12,5
Total	40	100

The research data shows that most of the elderly aged between 60 – 64 years (42.5%) are female (82.5%). Moreover, the education of the elderly is mostly at the elementary level (42.5%).

QoL for the elderly hypertension physical domain

Frequency distribution of respondents based on the QoL of the elderly with hypertension physical domain in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

Table 2: QoL for the elderly hypertension physical domain

QoL for the Elderly with Hypertension Physical Domain	Amount (n)	Percentage (%)
Good	27	67,5
Bad	13	32,5
Total	40	100

Based on the research data, it is known that the majority of the elderly have good quality in the physical domain, namely 27 elderly or 67.5%. In comparison, as many as 13 people have poor-quality physical domains or 32.5%.

QoL for the elderly hypertension psychological domain

Distribution of respondents based on the QoL of elderly hypertension psychological domain in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

Table 3: QoL for the elderly hypertension psychological domain

QoL For The Elderly With Hypertension Psychological Domain	Jumlah (n)	Percentage (%)
Good	27	67,5
Bad	13	32,5
Total	40	100

The research data shows that most elderly have good psychological domains, namely 27 elderly or 67.5%. In comparison, as many as 13 people have poor quality psychological domains or 32.5%.

QoL for the elderly hypertension domain of social relations

Frequency distribution of respondents based on the QoL of the elderly with hypertension in the domain of social relations in the work area of Bukit Hindu Public Health Center, Palangka Raya City

Table 4: QoL for the elderly hypertension domain of social relations

QoL for the Elderly with Hypertension is the Domain of Social Relations	Amount (n)	Percentage (%)
Good	24	60
Bad	16	40
Total	40	100

Based on the research data, it is known that the majority of the elderly have good quality in the domain of social relations, namely 24 elderly or 60%. Meanwhile, 16 people have poor quality in social relations or 40%.

QoL of the elderly hypertension domain of environmental relations

Frequency distribution of respondents based on the QoL of the elderly with hypertension in the environmental domain in the Bukit Hindu Public Health Center, Palangka Raya City.

Table 5: QoL of the elderly hypertension domain of environmental relations

QoL of Elderly Hypertension Environmental Domain	Amount (n)	Percentage (%)
Good	25	62,5
Bad	15	37,5
Total	40	100

The research data shows that most elderly have good quality in the environmental domain, namely 25 elderly or 62.5%. Meanwhile, 15 people have poor quality in the environmental domain, or 37.5%.

Anxiety

Distribution of elderly respondents with hypertension based on anxiety in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

Table 6: Distribution of anxiety in the work area of Bukit Hindu Public Health Center, Palangka Raya City

Anxiety	Amount (n)	Percentage (%)
No anxious	21	52,5
Anxious	19	47,5
Total	40	100

The research data shows that most elderly are not anxious, namely, 21 elderly or 52.5%. While the elderly were anxious as many as 19 people or 47.5%.

Nutritional status

Distribution of hypertensive elderly respondents based on nutritional status in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

Table 7: Nutritional status

Nutritional Status	Amount (n)	Percentage (%)
Normal	21	52,5
Abnormal	19	47,5
Total	40	100

The research data shows that most of the elderly have normal nutritional status, namely 21 elderly or 52.5%. Meanwhile, 19 people have abnormal nutritional status, or 47.5%.

Independence

Distribution of elderly respondents with hypertension based on independence in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

Table 8: Distribution of independence in the work area of Bukit Hindu Public Health Center, Palangka Raya City

Independence	Amount (n)	Percentage (%)
Independent	28	70
Dependency	12	30
Total	40	100

Based on the research data, it is known that the majority of the elderly have independence, namely 28 elderly or 70%. In comparison, having a dependency on as many as 12 people or 30%.

Bivariate Analysis

The Relationship between Anxiety and QoL in the Elderly Hypertension Physical Domain in the work area of the Bukit Hindu Public Health Center, Palangka Raya City.

The *p*-value for the Chi-Square test analysis is 0.185, which is lower than 0.05; the hypothesis H0 is validated and can be considered correct. Therefore, there is no significant relationship between anxiety and the QoL of the elderly with physical domain hypertension at Bukit Hindu Public Health Center, Palangka Raya City, in April 2022.

This study found that 57.89 percent of senior hypertension patients with a high QoL in the physical domain also experienced anxiety. This shows that it is still feasible for those over 60 struggling with anxiety to enjoy a high QoL. This finding may have some relationship to the elements that have a role in the development of anxiety. A person's mental health affects his level of physical comfort as well as his level of physical fitness. Anxiety and QoL are two factors that can affect a person's physical health, especially with age (Yuniarsih, Nugroho, & Hasanah, 2021). Both psychological and physiological variables may play a role in the development of anxiety. Physical variables contributing to anxiety include the environment and a person's health (Nurchayati, 2016). Older people with hypertension can no longer experience anxiety because they already know their health condition. Difficulty sleeping or resting, feeling anxious or restless, frequently shaking, disappointed, and worried, often worrying even

about relatively minor issues, experiencing anxiety during activities, being alone and easily anxious or afraid, and experiencing discomfort are all symptoms of worry. Older people are more likely to suffer from anxiety as a result.

The findings of this study agree with previous research conducted by Nurchayati, which found no relationship between feelings of anxiety and the level of QoL experienced by CKD patients.

The relationship between anxiety and QoL in elderly hypertension psychological domain

The chi-square test results with a confidence level of 95 percent showed that the *p*-value for the relationship between anxiety and QoL in the psychological domain of elderly hypertension was 0.413. This is determined by looking at the test results. Therefore, the decision H0 is accepted (*p* is more than 0.05) based on the p-value of the statistical test results. This shows no relationship between anxiety and the QoL of the elderly with hypertension in the psychological domain at Bukit Hindu Public Health Center, Palangka Raya City.

According to the findings of this study, 63.16 percent of elderly participants with hypertension who have a high QoL also have a psychological domain of concern. This shows that the elderly who struggle with anxiety still deserve to have a decent QoL from a psychological point of view.

One of the psychological aspects that can cause anxiety in the elderly with hypertension is the changes that occur in their lives, such as taking hypertension medication every day (Nurchayati, 2016). As a result, the elderly who have long suffered from hypertension and are used to their health conditions may no longer experience anxiety.

This study's findings align with the results of research conducted by Dzakiyyah (2019), who found no significant relationship (*p* more than 0.05) between anxiety levels and quality. Life of the elderly living in Penanggungan Village, Malang (Dzakiyyah, 2019). This study supports the results of this study.

The relationship between anxiety and QoL in the elderly hypertension the domain of social relations

The *p*-value for the relationship between anxiety and QoL in the hypertensive elderly in the social relation domain was calculated as 0.525 based on the findings of the chi-square test, which was performed with a confidence level of 95 percent. Based on the *p*-value found in the statistical test results, hypothesis H0 was accepted (*p* more than 0.05), which means no relationship between anxiety and the QoL of older people with hypertension. In the context of social relations at the Bukit Hindu Public Health Center in Palangka Raya City in April 2022.

The results of this study show that 57.89 percent of hypertensive elderly with a good QoL in the realm of social interaction also experience anxiety. This shows that the elderly who face anxiety still deserve a decent QoL compared to others. Older people are more likely to suffer from anxiety and increased blood pressure. Anxiety produces a spike in the hormone adrenaline, which causes the heart to beat faster, which in turn causes an increase in blood pressure (Dzakiyyah, 2019).

Apart from sexual activity, personal interactions, social connections, and social support all fall under the umbrella of the social sphere. The presence, willingness, and caring of individuals who can rely on, appreciate, and love us are what we mean when we talk about social support. Encouragement, attention, appreciation, help, and affection are forms of social support that can help a person develop a more optimistic view of themselves and the world around them. People develop this view when they receive social support in their environment (Azizah & Dwi Hartanti, 2016).

According to this study's findings, most elderly participants have personal relationships, good social relations, and social support from the surrounding environment. As a result, most elderly participants who experience anxiety have a high QoL in social relations.

The relationship between anxiety and QoL for the elderly hypertension environmental domain

Based on the chi-square test with 95 percent confidence, the *p*-value to determine the relationship between anxiety and the QoL of the elderly suffering from hypertension in the environmental domain was found to be 0.403. Based on the *p*-value found in the statistical test results, the H0 decision was accepted (pless of 0.05), indicating no relationship between anxiety and the QoL of older people with hypertension in the environmental domain. At Bukit Hindu Public Health Center in Palangka Raya City in April 2022.

The results of this study show that 57.89 percent of senior hypertension patients with a good QoL in the environmental domain also experience anxiety. This shows that the elderly who struggle with anxiety are still eligible to have a decent QoL in their area. Financial resources, freedom, physical security and safety, health

and social care (quality and accessibility), home environment, opportunities to acquire information and learn new skills, participation in and opportunities for recreation or recreation, physical environment (pollution, noise, traffic) traffic, climate), and transportation is examples of topics that fall within the environmental domain (Azizah & Dwi Hartanti, 2016).

The relationship between nutritional status and QoL in elderly hypertension physical domain

The chi-square test results with a confidence level of 95 percent showed that the physical domain obtained a *p*-value of 0.058 to determine whether there was a relationship between nutritional status and QoL of older people with hypertension. Therefore, the decision H0 was accepted (*p* less from 0.05) based on the *p*-value of the results of statistical tests, which showed no relationship between nutritional status and the quality of the elderly with physical domain hypertension at Bukit Hindu Public Health Center. Center, Palangka Raya City, April 2022. This information was obtained from the test results.

According to the findings of this study, 52.63 percent of senior hypertensive patients had unsatisfactory nutritional conditions while having a high QoL in the physical realm. This shows that elderly hypertensive patients with deviant nutritional status can still have a decent QoL in the physical realm even though their nutritional status is not normal. However, it was also found that the elderly had poor nutritional status, so the distribution of the elderly with normal nutritional status was quite high. This is because the elderly eat on a regular schedule with a menu that contains sufficient nutritious food. Tooth decay or loss, decreased taste and muscle coordination, poor physical condition, economic and social problems, and variables affecting food absorption in the elderly contribute to malnutrition. Decreased gastrointestinal fluid (secretion of pepsin) and proteolytic digestive enzymes result in protein absorption not running efficiently, and lack of saliva can cause difficulty swallowing and accelerate tooth decay and decrease intestinal motility, which results in prolongation of time. Transit time. This can lead to an enlarged stomach and constipation. time) in the digestive tract causing abdominal enlargement and constipation (Lailiyah, Rohmawati, & Sulistiyani, 2018). Therefore, it is known that the elderly at Bukit Hindu Health Center located in Palangka Raya City have low nutritional status.

The relationship between nutritional status and QoL in elderly hypertension psychological domain

The findings of the chi-square test conducted with a confidence level of 95 percent showed that the physical domain got a *p*-value of 0.185 when trying to determine the relationship between nutritional status and QoL of elderly individuals with hypertension. Therefore, the decision H0 was accepted (*p* less than 0.05) based on the *p*-value found in the statistical test results, which showed no relationship between nutritional status and the quality of the elderly population with hypertension in the psychological domain at Bukit Hindu Public Health Center in Palangka Raya City in April 2022.

According to the findings of this study, 57.90 percent of the elderly have a high QoL regarding their psychological well-being but have an unsatisfactory nutritional status. This shows that the elderly with abnormal nutritional status are still eligible to have a decent life in the psychological realm. This is especially true for those who live longer. An individual's nutritional status is a statement of that individual's nutritional balance as a function of several different variables (Nursilmi, Kusharto, & Dwiriani, 2017).

The emergence of a cascade of nutritional problems at a young age, which leads to the manifestation of the condition in old age, is the root cause of nutritional issues. According to the findings of several studies, nutritional problems in the elderly are almost always caused by excessive amounts of nutrition, which is a risk factor for several degenerative diseases, including coronary heart disease, high blood pressure, diabetes mellitus, osteoarthritis, arthritis, stroke, and cancer. Nonetheless, nutritional problems, such as Chronic Energy Deficiency (CED) and micronutrient deficiencies, are frequently observed in the elderly (Nawasielcawa, 2021).

There are certain elderly who experience feelings of loneliness and meaninglessness, as well as a lack of self-satisfaction, even though most of the elderly have a decent QoL in the psychological field. This occurs due to the elderly experiencing psychological changes such as inadequacy compared to younger people, reduced appearance, changes in their way of life, and knowledge of death (Nursilmi et al., 2017).

This study is similar to the findings of another study in 2015 by Ratnaningrum under the title Relationship of Fiber Intake and Nutritional Status with Blood Pressure in Menopausal Women in Kuwiran Village Banyudono

District, Bayoyali Regency. According to the research findings, the Chi-square test conducted to investigate the relationship between nutritional status and blood pressure yielded a *p*-value of 0.412 (*p* more than 0.05), indicating no relationship between nutritional status and blood pressure in postmenopausal. women living in Kuwiran Village, Banyudono Boyolali Regency (Ratnaningrum, Setyaningrum Rahmawaty, Rahmawati, & Gz, 2015).

The relationship between nutritional status and QoL in the elderly hypertension the domain of social relations

Based on the chi-square test with a 95 percent confidence level, the *p*-value for the relationship between nutritional status and QoL in social relations for older people with hypertension is 0.110. The decision H0 was accepted (*p* less than 0.05) based on the *p*-value of the statistical test results, which showed no relationship between nutritional status and the quality of older people with hypertension in the social relation domain in Bukit Hindu Village. Palangka Raya City Health Center, April 2022. To take place in April 2022.

According to the findings of this investigation, 47.37 percent of older people with hypertension and impaired nutritional status reported having a high QoL in the area of social interaction. This shows that the elderly are still eligible for a high QoL with abnormal nutritional conditions. Most older participants in the study lived with their families, usually husbands, wives, children, and grandchildren. As a result, the elderly participate in a wider range of social interactions with higher frequency and intensity. In this way, there is an increase in social care provided to the elderly living with their families. Support from family and community affects the elderly living in the community. Both the lack of support for families and communities as well as adequate support for families and communities will cause the elderly to experience unfavorable changes in their lives; on the other hand, proper support of families and communities will cause the elderly to experience beneficial changes in their lives; The QoL of the elderly will be negatively affected by these two factors (Lailiyah et al., 2018).

The relationship between nutritional status and QoL in elderly hypertension environmental domain

The chi-square test results with a 95 percent confidence level and *p*-value = 0.002 found a relationship between nutritional status and QoL in elderly individuals suffering from hypertension in the field of social relations. Therefore, based on the *p*-value found in the statistical test results, the H0 decision was rejected (*p* = 0.05), indicating a significant relationship between nutritional status and the quality of the elderly with environmental domain hypertension at Bukit Hindu Public Health Center in the city of Palangka Raya.

In this particular study, the proportion of elderly hypertensive patients with a low QoL in the environmental domain and abnormal nutritional status was 63.16 percent. In comparison, the proportion of elderly hypertensive patients with a high QoL in the environmental domain and normal nutritional status was 83.71 percent.

The level of physical activity carried out by the elderly can affect their nutritional status, especially in terms of awareness of the importance of maintaining a healthy level of nutritional status, which in turn can affect the QoL of the elderly. The person himself experiences. Taking care of one's nutritional needs can facilitate the adjustment process to new circumstances and maintain the ongoing process of cell turnover in the body, which can lead to an extension of one's lifespan. In general, the elderly with a nutritional status below the average have a lower QoL than the elderly who have normal nutritional status. For the elderly, having a healthy nutritional condition is directly correlated with a higher QoL. On the other hand, a person's QoL will be directly proportional to the degree of nutritional deficiency in his body (Nurhidayati, Suciana, & Septiana, 2021).

The elderly may play varied roles in adjusting to their environment due to various life situations. On the other hand, if parents believe that they have sufficient assistance from the facilities in their home, this will encourage them to participate in daily activities. If people of retirement age can do this, there is hope for environmental well-being. The elderly population will benefit from improved environmental welfare, which will help them achieve the highest possible QoL. For residents to want to stay in their homes and feel at home, they must create a peaceful, pleasant, and pleasant atmosphere for them. This will ensure that the elderly will get the support they need from the environment to achieve a high QoL. There is an innate relationship between an individual's QoL and the QoL of others around them in their environment (Lailiyah et al., 2018).

This research is supported by Nurhidayati et al. (2021), which states a relationship between nutritional status and QoL in the elderly at Jogonalan 1 Health Center (*p*-value = 0.000). This research was conducted at Puskesmas Jogonalan 1 (Nurhidayati et al., 2021).

The relationship between independence and QoL for elderly hypertension physical domain in the work area of the Bukit Hindu Public Health Center, Palangka Raya City

Based on the findings of the chi-square test conducted with a confidence level of 95 percent, the *p*-value to determine whether there is a relationship between the elderly who suffer from hypertension and the level of independence in the physical domain is 0.000. The decision H0 was rejected based on the *p*-value of the statistical test results (*p* more than 0.05), which showed a relationship between independence and the QoL of the elderly with physical domain hypertension at Bukit Hindu Public Health Center in Palangka Raya City in April 2022.

The percentage of elderly participants in this study who experienced dependence and had a poor QoL in the physical domain was 75 percent. In comparison, the percentage of elderly participants with a high QoL in the physical domain was 85.71 percent. This shows that the elderly with hypertension who have a low QoL in the physical domain are more likely to develop dependence.

If parents can maintain a high level of independence, this will improve the individual's overall QoL. Providing opportunities for the elderly to maintain independence and participate in daily activities can improve their health and well-being. This follows the idea put forward by Miller, which states that a high level of dependence among parents is associated with a lower QoL for these parents (Supraba & Permata, 2021).

The World Health Organization (WHO) asserts that the QoL of the elderly can be broken down into four categories: physical, psychological, social connections, and environmental. Independence in carrying out daily tasks is an important component of the QoL of the elderly concerning the physical aspects of life (Ningrum, Chondro, et al., 2019).

As they age, they will see a decline in their body's abilities as a natural consequence of aging. Due to this, the elderly will experience decreased walking function, reduced balance, and decreased overall functional capacity. If the level of independence of the elderly decreases, their QoL of the elderly will inevitably suffer. The elderly will experience an increased QoL if they can carry out daily tasks with greater autonomy.

This research was supported by Supraba and Permata (2021), which state that the level of independence has a significant relationship with the QoL of the elderly, as indicated by a *p*-value of 0.000. This study found that the relationship between the level of independence with the QoL of the elderly is significant.

The relationship between independence and QoL in elderly hypertension psychological domain

According to the findings of the chi-square test conducted with a confidence level of 95 percent, the *p*-value to determine whether there is a relationship between older people suffering from hypertension and their level of independence in the physical domain is 0.004. The decision H0 was rejected based on the *p*-value of the results of statistical tests (*p* more than 0.05), which showed a relationship between independence and the quality of the elderly with psychological domain hypertension at Bukit Hindu Public Health Center in Palangka Raya City.

According to this study, the proportion of elderly hypertension sufferers who suffer from dependence is 66.67 percent. In comparison, the proportion of elderly hypertension patients with a good QoL in the psychological and independent fields is 82.14 percent.

When an older person can carry out daily activities with greater autonomy, the QoL of the older person will improve. The findings of previous studies lend credence to these findings. According to the results of this study, there is a significant relationship between the mental capacity of parents and the extent to which they can care for themselves independently. Cognitive function is one component that plays a role in determining the amount of independence. The decline in cognitive function experienced by the elderly will result in a decrease in their capacity to perform daily tasks, such as walking without the help of a cane or walker, which is used to facilitate the elderly in their activities. The loss of the capacity of the elderly to perform daily tasks will impact the type of dependence of the elderly on others. Parents are more likely to become less active due to this dependence, which has an influence. If it continues for a long time, it will cause an increase in morbidity and mortality and impact the QoL of the elderly, who tend to suffer the consequences (Supraba & Permata, 2021).

The relationship between independence and QoL for the elderly hypertension the domain of social relations

Based on the findings of the chi-square test conducted with a confidence level of 95 percent, the *p*-value is used to determine whether there is a relationship between the elderly who suffer from hypertension and the level

of independence and QoL in social interactions. The relationship domain was found to be 0.005. Based on the *p*-value found in the statistical test results, the decision H0 was rejected (*p* 0.05), indicating a relationship between independence and the QoL of elderly patients diagnosed with hypertension in Bukit Hindu. Public Health Center in Palangka City. This is determined by looking at the results of statistical tests.

According to this study, hypertensive elderly with a low QoL in social relations have a dependency rate of 75 percent, while hypertensive elderly with a high QoL in social relations have a dependency level of 75 percent. Older people with hypertension who are independent and have a high QoL due to the social support received from their peers will affect their response and behavior, which in turn will affect the QoL of the elderly longer (Rahayu & Khairani, 2020).

The relationship between independence and QoL in the elderly hypertension environmental domain

The results of the chi-square test conducted with a confidence level of 95 percent to examine the relationship between elderly individuals diagnosed with hypertension with the level of independence and QoL in the social relationship domain found that the *p*-value was significantly lower than 0.002. The decision H0 was rejected based on the *p*-value of the results of statistical tests, which showed a relationship between independence and the quality of the elderly with hypertension in the environmental domain at Bukit Hindu Public Health Center, Palangka Raya City, April 2022. This conclusion was obtained because the *p*-value was less than 0.05.

In this study, the proportion of older people with hypertension who are dependent and have a poor QoL in the environmental domain is 75 percent, while the proportion of hypertensive older people who have a high QoL in the environmental domain is 78.57 percent. The environmental domain refers to how a person can help the surrounding environment, such as through culture, rules, and goal expectations. If the elderly do not get the necessary help from the surrounding community, their QoL will suffer directly.

Multivariate Analysis

Relationship of Anxiety, Nutritional Status and Independence with QoL of Elderly Hypertension Physical Domain in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

Based on the statistical analysis results, one variable is related to the QoL of the elderly with hypertension in the physical domain. This independent variable has a significant level of 0.004 compared to other variables. The elderly population with physical domain hypertension has an Exponent Beta (Exp. B) value of 15,791, indicating a strong relationship between independence and the population's QoL. This shows that an increase in a person's level of independence by 15,791 times in the physical domain can improve the QoL of older people with hypertension.

Activities of daily living, dependence on drugs and other forms of medical assistance, fatigue and energy levels, mobility, pain and discomfort, rest and work, and capacity to work are all included in the physical domain (Nurhayati, Rahayuningsih, & Alifiar, 2021).

If a person's physical, psychological, and social health are in good condition, it can be told that the person's QoL is high. Various elements, including physical aspects, social factors, psychological problems, and environmental factors, contribute to the QoL of the elderly. Activities of Daily Living (ADL), often known as the elderly's capacity to perform basic activities of daily living, correlate with a person's level of physical health. The elderly in good physical condition will have an independent level of ADL independence, which will affect the QoL of the elderly; however, having an independent level of ADL independence allows the elderly to have a good QoL. Those elderly whose physical health deteriorates enable others to depend on them to perform daily tasks. The elderly will be able to live a lower QoL as a result of this (Supraba & Permata, 2021).

Relationship of Anxiety, Nutritional Status and Independence with QoL of Elderly Hypertension Psychological Domain in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

According to the findings of statistical studies, one variable relates to the QoL of the elderly with hypertension in the psychological domain. This variable is the independent variable and is proven to have a significance level of 0.013. The Beta Exponent Value (Exp. B), which measures the strength of the joint, is 10,650. This figure illustrates the strong relationship between independence and the QoL of older people with hypertension in the psychological realm. This shows that independence can improve the QoL of older people with hypertension psychological domain 10,650 times.

WHOQOL-Bref covers several psychological domains related to psychological well-being. This psychological domain includes body image and appearance, positive feelings, negative feelings, self-esteem, personal beliefs, thinking, learning, memory and concentration, and physical image and appearance (Nurhayati et al., 2021).

In this survey, female respondents comprised 82.5 percent of the entire group. According to Rahayu and Khairani (2020), there is a correlation between a person's gender and their level of independence in later life. Older women enjoy more autonomy than senior men, which is expected to become more pronounced as baby boomers live longer (Rahayu & Khairani, 2020). Therefore, the state of a person's mental health is important in determining the QoL experienced by a person. Compared to other people's circumstances, the senior citizens of the Bukit Hindu Community Health Center area almost always take the opportunity to reflect and gain insight into every event, and they acknowledge their gratitude and sense of luck. This is in line with the survey findings, which show that most of the elderly living in UPT PSLU Jember have a high QoL-based on their psychological well-being.

Relationship of Anxiety, Nutritional Status and Independence with QoL of Elderly Hypertension Social Relations Domain in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

Based on the statistical analysis results, one variable relates to the QoL of the elderly with hypertension in social relations. This variable is the independent variable and has a significant level of $p = 0.016$. The Beta Exponential Value (Exp. B), which measures the strength of a relationship, is 9,200 in the social relationship domain. This figure reflects the strong relationship between elderly hypertension and independence. This shows that independence can improve the QoL of elderly hypertension in social relations 9,200 times.

The results showed that seventy percent of the total respondents were included in the independent category regarding their level of independence. This is because most of the respondents are aged between 60-64 years (42.5 percent), which is the age range of the elderly who can still tolerate daily activities that can be done alone. However, as they age, they become more likely to need the help of others to meet their daily needs longer (Rahayu & Khairani, 2020). The social domain includes interactions that occur between two or more people, where the actions of one person have the potential to modify, enhance, or influence the actions of other individuals (Nurhayati et al., 2021).

Relationship of Anxiety, Nutritional Status and Independence with QoL of Elderly Hypertension Environmental Domain in the work area of Bukit Hindu Public Health Center, Palangka Raya City.

Based on the statistical analysis results, two variables in the environmental domain are related to the QoL of older people with hypertension. The variables were nutritional status ($p = 0.029$) and independent variables ($p = 0.038$). Nutritional status is the characteristic most related to the QoL of senior hypertensive patients, even more so than independence. This is the case when comparing two factors. The value of the exponential beta coefficient, also known as the strength of the relationship between nutritional status and QoL in the environmental domain of hypertension in the elderly, is 7.204. This shows that the nutritional status of 7,204 times can improve the QoL of the elderly with hypertension when viewed from environmental factors. While the Exponential Beta (Exp. B) value, also known as the strength of the relationship between independence and QoL of parents with hypertension in the environmental domain, is 6.831, it is important to note that this value only applies to the environmental domain. This shows that independence is 6,831 times higher than normal and can potentially improve the QoL of older people with hypertension in the environmental domain.

The area of the individual's environment includes conditions, the availability of a place to live to carry out all life activities, and facilities and infrastructure that can support life (Nurhayati et al., 2021). The condition of the Bukit Hindu Health Center, which is a home for the elderly population, is an important factor in the survival of the population. For residents to have a sense of belonging to their environment and desire to live in their current location, the residents must provide a calm, relaxed, and pleasant atmosphere for them. Therefore, the environment will serve as a support system for the elderly, thus enabling them to achieve a good QoL.

Older people are more likely to experience impaired functional capacity if they have an abnormal diet, including being underweight or overweight. Inadequate nutrition is often caused not only by socio-economic problems but also by disease conditions. For example, a lower-than-normal body weight results from consuming fewer calories than needed for body maintenance. Suppose a protein deficiency accompanies this. In that case, it will cause permanent cell damage, leading to hair loss, reduced body resistance to disease, and the potential for infection.

Older residents of big cities often suffer from unhealthy levels of obesity. If you used to eat a lot when you were young, you are more likely to have excess body fat later in life. This is especially true for older people, whose bodies burn fewer calories because they move less. Although they are generally aware that they should eat less, changing their diet is difficult. Excessive weight gain and obesity are known to play a role in the development of several different diseases. These conditions include heart disease, diabetes, and high blood pressure. Compared to those of normal weight, those who were malnourished and obese later were said to have a lower QoL, particularly regarding their physical ability and overall physical well-being (Awaru & Bahar, 2021).

According to the findings of this research project, there is a statistically significant relationship between the elderly living with hypertension and their level of independence in environmental aspects with their QoL. This follows the theory that one factor that affects the QoL is the level of independence, namely the ability or condition in which individuals can manage or overcome their interests without depending on others. This is because independence is defined as the ability or situation in which individuals can manage or overcome their interests without depending on others (Sumbara, Mauliani, & Puspitasari, 2019).

CONCLUSION

Based on the study results, there was no relationship between anxiety and the QoL of the elderly with hypertension in the physical, psychological, social, and environmental domains in the work area of Bukit Hindu Public Health Center, Palangka Raya City, Indonesia. This finding is based on the analysis findings (p more than 0.05). The Bukit Hindu Public Health Center in Palangka Raya City is less than 0.05), while nutritional status has no relationship with the QoL of older people with hypertension in physical, psychological, and social relationships. Domain (p is more than 0.05). At Bukit Hindu Public Health Center, Palangka Raya City, researchers found a relationship between the level of independence of elderly patients and their QoL in terms of physical, psychological, social, and environmental domains ($p < 0.05$). The independent variable is the most important factor affecting the QoL of the elderly with hypertension in the physical, psychological, and social domains, while nutritional status is the most important factor affecting the QoL. The life of the elderly with hypertension in the environmental domain.

The results of this study are expected to contribute to increasing knowledge and potentially be used as references and references for further research related to this research.

The limitation of this research was only the local area with limited respondents. Future research should use a wider scope of research's location, so the number of respondents could increase to make a general conclusion.

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