



# 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

Ni Luh Putu Dewi Novilasari<sup>1,2,\*</sup>, Nia Kania<sup>2,3</sup>, Roselina Panghiyangani<sup>4</sup>, Muhammad Abdan Sadiqi<sup>2,5</sup>, Syamsul Arifin<sup>2</sup>

<sup>1</sup>Health Department of Centre Kalimantan, Kalimantan, Indonesia

<sup>2</sup>Master of Public Health, Master Program, Faculty of Medicine, Lambung Mangkurat University, Banjarbaru, Indonesia

<sup>3</sup>Ulin Hospital, Banjarmasin, Indonesia

<sup>4</sup>Faculty of Medicine, Lambung Mangkurat University, Banjarmasin, Indonesia

<sup>5</sup>School of Psychology, Faculty of Medicine, Lambung Mangkurat University, Banjarbaru, Indonesia

## Abstract

**Aim:** This research aimed to examine the relationship between anxiety, nutritional status, independence, and Quality of Life (QoL) among the elderly with hypertension treated at the Bukit Hindu Public Health Center in Palangka Raya City.

**Methodology:** This research was a cross-sectional study conducted in the waiting clinic area of the Bukit Hindu Public Health Center in Palangka Raya City. Forty participants were randomly selected for this survey. The chi-square test and multiple logistic regression analyses were used to examine the data.

**Findings:** Physical, psychological, social, and environmental domains show no significant relationship between anxiety and QoL in the hypertensive elderly. However, the nutritional status variable does show a significant relationship between QoL and the hypertensive elderly. When looking at the relationship's physical, psychological, social, and environmental aspects, the elderly with hypertension who receive care at the Bukit Hindu Public Health Center in Palangka Raya City have a higher QoL when they are more independence-sufficient. To a greater extent than any other factor, the independent variable influences the physical, mental, and social dimensions of older people's QoL due to hypertension. In contrast, nutritional status is a significant determinant of quality of life (QoL) for the elderly with hypertension in the environmental domain.

**Implications/Novel Contribution:** The findings from this study will contribute knowledge and provide valuable information for future researchers.

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

**Received:** 13 May 2022 / **Accepted:** 18 July 2022 / **Published:** 11 September 2022

## INTRODUCTION

Because of declining birth rates and rising life expectancy, the global population is aging and becoming increasingly more concentrated among the elderly (Silva e Farias et al., 2020). Therefore, the elderly are more likely to experience permanent health issues and diminished functional capacity. Therefore, one of the most pressing problems the elderly face today is Health-Related Quality of Life (HRQoL), which includes the perception of physical and mental health and its relationship to health risks and conditions, functional status, social support, and socioeconomic position (Ran et al., 2017). The World Health Organization (WHO) defines the quality of life as an individual's subjective appraisal of their social and cultural context, including an assessment of the degree to which one's values and priorities are aligned with those of the community in which one resides (Mi-Youn, 2019; Rizal et al., 2022).

Multiple studies have shown that, as the population ages, its quality of life declines. Age-related declines in cognitive and bodily abilities contribute to a decline in quality of life. Consequently, they will likely experience

\* Corresponding author: Ni Luh Putu Dewi Novilasari

† Email: [dewinovilasari@gmail.com](mailto:dewinovilasari@gmail.com)

a wide range of health issues as they get older (Rizal et al., 2022; Rerkklang, 2018). People with hypertension, or high blood pressure, almost always have a lower quality of life (QoL) than those with normal blood pressure. If a person's quality of life (QoL) drops, it will impact their ability to recover from health problems and avoid future ones, as stated by Soni, Porter, Lash, and Unruh (2010). Having to deal with these issues can have a negative impact on a person's quality of life (Soni et al., 2010; Shahbaz, Sherafatian-Jahromi, Malik, Shabbir, & Jam, 2016). Depending on their hypertension severity, the effects on older people's quality of life (QoL) can be mild, moderate, or severe (Saftarina & Rabbaniyah, 2016).

According to Health Research and Development Agency (2018), hypertension prevalence in Central Kalimantan Province was 59.07% among those aged 55-64, 64.71% among those aged 65-74, and 72.51% among those aged 75 and up. According to the results of the surveys conducted in accordance with the characteristics of each age group, this percentage was calculated Health Research and Development Agency (2018). Damage to organs, cardiovascular problems, stroke, kidney failure, and vision loss are some consequences of untreated hypertension (Jam, Akhtar, Haq, Ahmad-U-Rehman, & Hijazi, 2010; Widiana & Ani, 2017). Medically diagnosed stroke prevalence in the population ranges from 49.06% in those aged 55-64 to 60.75% in those aged 65-74 and 81.27% in those aged 75 and older, as reported by Health Research and Development Agency (2018). Population characteristics between 55 and 64 were used to arrive at this conclusion.

Meanwhile, in Central Kalimantan Province, the prevalence of chronic kidney failure was 0.97 and 0.57 percent, respectively, for those aged 55-64 and 65-74 and 1.20 percent for those aged 75 and older, depending on demographic characteristics. The doctor's diagnosis forms the basis for this report. Among people aged 55-64, 16.41% were on hemodialysis, while this number rose to 7.72% among those aged 75 and up 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 older people who had a stroke was 0 (zero percent); and the number of older people who suffer from chronic kidney disease as many as 18 people (3.49 percent). However, in 2021, the number of older people with hypertension who what examined at the puskesmas decreased (2.98 percent).

Several factors, such as an individual's physical health, mental health, social support, environment, family function, chronic disease (drug use), economic position, and nutritional status, can affect a person's quality of life, as stated by Gabriel and Bowling (2004). Several factors can affect a person's quality of life, including age, gender, level of physical illness, economy, spirituality, inability to sleep, and degree of independence (Meiner, 2006; Waheed, Klobas, & Ain, 2020).

It is far more common for older people to suffer from anxiety problems than for them to suffer from depression. The elderly, on the other hand, are prone to a variety of psychological problems, the most prevalent of which are feelings of loneliness, melancholy, hopelessness, and anxiety (Annisa & Ildil, 2016).

The state or condition of a person that is said to be caused by the consumption of nutrients from food is referred to as that person's "nutritional status." Food intake is not the only factor that can lead to nutritional issues; disease and infection are also possible contributors. Even if a person eats the appropriate amount of food every day but is still afflicted with an illness or infection, that person's nutritional status will suffer as a direct consequence of the illness or infection (Leo & Kedo, 2021).

A senior's quality of life (QoL) may be influenced by their ability to age in place while maintaining a high sense of self-worth and engaging in activities that bring them joy and independence. What if further precautions are not taken early on? In that case, a more significant proportion of older people will experience a decline in functional abilities due to the accumulation of a wide range of potentially debilitating health conditions. It is feared that this condition will make the elderly reliant on others for their day-to-day tasks; it can also impact the quality of life of the elderly. As a result, the elderly will need assistance, placing a significant social and economic burden on families, communities, and countries.

Many studies report results with varying OR values, the highest on this topic, indicating the importance of investigating the QoL of older people with hypertension, specifically anxiety, nutritional status, and independence. For this reason, the team behind "The Relationship of Anxiety, Nutritional Status, and Independence with QoL for

Elderly Hypertension in the Bukit Hindu Public Health Center in Palangka Raya City" set out to demonstrate and investigate these factors further.

### METHOD

The study used quantitative methods and analytical observation to examine the relationship between the independent (or risk) and dependent (or effect) variables. This project takes a cross-sectional method of design. People living in the Bukit Hindu Public Health Center catchment area in Palangka Raya City were eligible to participate in this study. The data for this study was gathered using a method called "purposeful sampling." Using a sampling strategy to decide is to consider or ground the choice on specific criteria.

The formula used is:

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

Information

n = Sample Size

$Z_{21 - \alpha/2} = 95\%$  Confidence Level means  $(1 - \alpha)$ .

p = Proportion of incidence prevalence

d = Precision set

### RESULTS AND DISCUSSION

Tables and written descriptions of the analysis were used to present the data collected through interviews and questionnaire filling for this study.

#### 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 mainly at the elementary level (42.5%).

##### *QoL for the elderly hypertension physical domain*

The frequencies of respondents are based on their quality of life in the physical domain in the context of elderly patients diagnosed with hypertension at the Bukit Hindu Public Health Center in 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

The research data shows 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 Bukit Hindu Public Health Center, Palangka Raya City work area.

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***

QoL in the social relationships domain among the elderly with hypertension: frequency distribution of respondents from the Bukit Hindu Public Health Center in 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 Bukit Hindu Public Health Center, Palangka Raya City work area.

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 Bukit Hindu Public Health Center, Palangka Raya City work area.

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 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 Bukit Hindu Public Health Center, Palangka Raya City work area.

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, we depend on as many as 12 people or 30%.

**Bivariate Analysis**

Among the staff at the Bukit Hindu Public Health Center in Palangka Raya City, a study was conducted to determine the correlation between elderly patients' levels of anxiety and their quality of life in terms of the physical domain caused by hypertension.

Hypothesis H0 is supported by the data, as the Chi-Square test analysis yielded a *p*-value of 0.185, which is less than 0.05. Consequently, in April 2022, at Bukit Hindu Public Health Center in Palangka Raya City, those over the age of 60 who have hypertension in the physical domain did not show any correlation between anxiety and QoL.

Anxiety was present in 57.89% of the elderly hypertensive patients with a high QoL in the physical domain. Despite their anxiety, people over 60 can still have a good quality of life. The factors that play a role in the emergence of anxiety may be connected to this finding. One's mental well-being has an impact on their physical fitness and ease of movement. Health declines with age and anxiety and quality of life are two factors that contribute to this decline (Yuniarsih, Nugroho, & Hasanah, 2021). Psychological and physiological factors may influence the anxiety of anxious feelings. The environment and a person's health play a role in the development of anxiety (Nurchayati, 2016). Those over 60 who have hypertension and know it are no longer at risk for anxiety. Symptoms of worry include difficulty sleeping or relaxing, anxiety or restlessness, trembling, disappointment, worrying about

seemingly insignificant things, experiencing anxiety while engaging in activities, difficulty relaxing when alone, and general discomfort. The likelihood of experiencing anxiety increases with age, especially in the elderly.

Similar to previous research by Nurchayati, which also found no relationship between anxiety and QoL for CKD patients.

#### ***The relationship between anxiety and QoL in elderly hypertension psychological domain***

The  $p$ -value for the relationship between anxiety and QoL in the psychosocial dimension of hypertension in the elderly was 0.413, according to chi-square test results with a 95% confidence level. The test results will tell us this. Based on the statistical test results, the decision  $H_0$  is accepted ( $p$ -value is more significant than 0.05). At the Bukit Hindu Public Health Center in Palangka Raya City, researchers found no correlation between the elderly patients' anxiety levels and their psychological quality of life.

This study found that 63.16 percent of the elderly participants with hypertension and a high QoL also had a domain of concern related to their mental health. As a result, it is clear that, from a psychological standpoint, even older people with anxiety deserve a good quality of life.

Taking hypertension medication daily, for example, can be a significant lifestyle change for older people, leading to anxiety if they are already susceptible to hypertension (Nurchayati, 2016). Older people who have had hypertension for a long time and have learned to live with it may find that their condition no longer causes them anxiety.

The results of this study agree with those of a previous study by the same authors Dzakiyyah (2019), who also found no significant relationship ( $p$  more than 0.05) between anxiety and quality. What it's like to be an older person in Malang's Penanggungan Village (Dzakiyyah, 2019). The findings of this study corroborate those of the study mentioned above.

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

Based on the chi-square test results, which were conducted with a 95% confidence level, the  $p$ -value for the relationship between anxiety and QoL in the social relation domain in the hypertensive elderly was determined to be 0.525. Because the  $p$ -value for  $H_0$  was more significant than 0.05, it was determined that there was no relationship between anxiety and QoL among the elderly with hypertension. As a part of interpersonal dynamics in April 2022 at Palangka Raya City's Bukit Hindu Public Health Center.

This study found that 57.89% of elderly hypertensive people with a good QoL in social interaction also experience anxiety. As a result, it is clear that seniors who struggle with anxiety still have the right to expect a good quality of life. Anxiety and hypertension are more prevalent in the elderly population. Increased heart rate and blood pressure directly result from the stress hormone adrenaline released in response to anxiety (Dzakiyyah, 2019).

The term "social sphere" can describe anything outside sexual activity, including interpersonal relationships, social networks, and social support. What we mean when we talk about social support is the presence, willingness, and care of people on whom we can rely, appreciate, and lavish love. Positive self- and environmental outlooks can flourish with the help of positive social support in the form of encouragement, attention, appreciation, assistance, and affection. According to (Azizah & Dwi Hartanti, 2016), people are more likely to adopt this perspective if provided with social support in their everyday lives.

The results showed that most of the older people in this study had close personal relationships, positive social relations, and environmental and social support. Accordingly, most elderly anxious participants report a high quality of life in their interpersonal relationships.

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

The chi-square test revealed a  $p$ -value of 0.403 when assessing the association between environmental stress and hypertensive elderly QoL. The  $H_0$  decision was accepted (less than 0.05) due to the low  $p$ -value in the statistical tests, which indicated no relationship between environmental anxiety and QoL among the elderly with hypertension. In April of 2022, in Palangka Raya City's Bukit Hindu Public Health Center.

In addition to having a good QoL in the environmental domain, anxiety was also present in 57.89% of the elderly hypertensive patients in this study. This demonstrates that older people experiencing anxiety can still obtain

a satisfactory quality of life in their community. Environmental issues include pollution, noise, traffic, climate, and transportation. It also includes issues like money, freedom, safety, health and social care (quality and accessibility), home environment, information and skill acquisition opportunities, opportunities to play and relax, and so on (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. The test was conducted to determine whether there was a relationship between nutritional status and QoL. Therefore, the decision  $H_0$  was accepted (with a  $p$ -value that was less than 0.05) based on the  $p$ -value of the results of statistical tests, which showed that there was no relationship between nutritional status and the quality of the elderly with physical domain hypertension at Bukit Hindu Public Health Center, Palangka Raya City, April 2022. The findings of the tests provided the basis for this information.

The findings of this study indicate that 52.63 percent of senior hypertensive patients had nutritional conditions that were less than satisfactory, despite having a high quality of life in terms of their physical health. This demonstrates that elderly hypertensive patients with abnormal nutritional status can still have a quality of life that is satisfactory in the physical realm, even though their nutritional status is abnormal. On the other hand, it was discovered that the elderly had a poor nutritional status; consequently, the proportion of the elderly with a normal nutritional status was relatively high. This is because older people adhere to a set eating schedule, and their meals always include a sufficient amount of food that is high in nutritional value. Malnutrition in the elderly can be caused by several factors, including tooth decay or loss, decreased taste and muscle coordination, poor physical condition, economic and social problems, and variables that affect food absorption. Lack of saliva can cause difficulty swallowing, accelerate tooth decay, and decrease intestinal motility, all of which can prolong time. This is because decreased gastrointestinal fluid (secretion of pepsin) and proteolytic digestive enzymes result in inefficient protein absorption. Transit time. This can cause your stomach to become distended as well as cause constipation. time) in the digestive tract, causing abdominal enlargement and constipation (Lailiyah, Rohmawati, & Sulistiyani, 2018). As a result, it is common knowledge that the senior citizens who receive care at the Bukit Hindu Health Center in Palangka Raya City have an elderly nutritional status.

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

With a 95% confidence level, the chi-square test revealed that the physical domain's  $p$ -value for determining the relationship between nutritional status and QoL of elderly individuals with hypertension was 0.185. Based on the  $p$ -value of the statistical test results showing no relationship between nutritional status and quality of life for the elderly population with hypertension in the psychological domain at Bukit Hindu Public Health Center in Palangka Raya City in April 2022, the decision  $H_0$  was accepted ( $p$ -value less than 0.05).

59% of the elderly have a high quality of life regarding their mental health, but they also have an unsatisfactory nutritional status, according to the results of this study. This demonstrates that older people with abnormal nutritional status can still have a fulfilling life from a psychological perspective. The elderly, in particular, will find this to be the case. A person's nutritional status is a statement about their dietary equilibrium as a function of several factors (Nursilmi, Kusharto, & Dwiriani, 2017).

Nutritional problems originate in a chain reaction that begins in childhood and culminates in the aging process. Multiple studies have concluded that the leading cause of nutritional issues in the elderly is overeating, increasing the risk of several degenerative diseases such as heart disease, hypertension, diabetes, arthritis, stroke, and cancer. However, the elderly often show signs of malnutrition, including Chronic Energy Deficiency (CED) and micronutrient deficiencies (?, ?).

While the majority of the elderly have a satisfactory psychological QoL, some suffer from feelings of isolation and meaninglessness and low levels of self-satisfaction. This is because the elderly often experience psychological changes associated with aging, such as feelings of inadequacy in comparison to younger people, diminished appearance, lifestyle shifts, and the knowledge of mortality (Nursilmi et al., 2017).

Findings from this study are consistent with those from a study conducted in 2015 by Ratnaningrum titled

Relationship of Fiber Intake and Nutritional Status with Blood Pressure in Menopausal Women in Kuwiran Village, Banyudono District, Bayoyali Regency. Results from a Chi-square test showing no relationship between nutritional status and blood pressure among postmenopausal women in Kuwiran Village (Ratnaningrum, Setyaningrum Rahmawaty, Rahmawati, & Gz, 2015). This value was 0.412, significantly higher than the relationship level of 0.05.

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

According to the chi-square test at the 95% confidence level, the *p*-value for the relationship between nutritional status and QoL in social relations for the elderly with hypertension is 0.110. Due to the statistical test results showing no correlation between nutritional status and the quality of life for seniors in Bukit Hindu Village who are hypertensive, the decision  $H_0$  was accepted (*p*-value less than 0.05). Treatment at the Palangka Raya City Hospital was scheduled for April 2022.

This study found that almost half of the elderly with hypertension and poor nutritional status also reported a high quality of life (QoL) due to their relationships with others. Despite abnormal dietary conditions, the elderly can still have a good quality of life, as demonstrated here. Most of the study's seniors reported living with their partners, offspring, and/or grandchildren. Therefore, the elderly engage more frequently and intensely in a broader variety of social interactions. The elderly who are cared for by their families receive more social support. Beneficial effects on the quality of life for seniors in the community can be seen when they receive social and familial support. To paraphrase, "the quality of life of the elderly will be negatively impacted by both the lack of support from families and communities and the inadequacy of such support." In contrast, "the quality of life of the elderly will be positively impacted by the proper support from families and communities" (Lailiyah et al., 2018).

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

The chi-square test showed a relationship between nutritional status and QoL in social relationships among the elderly with hypertension, with a 95% confidence level and a *p*-value of 0.002. Consequently, the  $H_0$  decision was rejected (*p*-value= 0.05) due to the statistical test results, suggesting a significant relationship between the nutritional status and the quality of the elderly with environmental domain hypertension at the Bukit Hindu Public Health Center in the city of Palangka Raya.

There was a significant decrease in quality of life (QoL) in the environmental domain and an abnormal nutritional status among the elderly hypertensive patients in this study (63.16%). Comparatively, 83.71% of elderly hypertensive patients reported having a high QoL in the environmental domain and healthy nutritional status.

Their level of physical activity may influence seniors' quality of life (QoL) because of the impact poor nutrition has on their bodies and mind. In other words, the individual has the experience. Taking care of one's nutritional needs can help one adjust to new circumstances and keep the body's constant process of cell turnover going, both of which contribute to a longer life. Older people's quality of life (QoL) is lower when their nutritional status is below average compared to older people whose nutritional status is normal. High quality of life (QoL) correlates with good nutritional status in the elderly. Contrarily, a person's quality of life (QoL) will decrease in proportion to the severity of any nutritional deficiencies he may have (Nurhidayati, Suciana, & Septiana, 2021).

Due to their unique experiences, the elderly may play a wide range of roles in helping shape their communities. On the other hand, parents are more likely to participate in their children's daily activities if they feel they have adequate support from the resources available at home. There's hope for environmental health if retirees can pull this off. Environmental improvement will help the elderly live better, improving their quality of life. It's essential to cultivate a calm, pleasant, and welcoming environment so that people enjoy staying in their homes and consider making it their permanent residence. This will ensure that the elderly have the help they need from their surroundings to have an excellent quality of life. A person's quality of relationship (QoL) is inextricably linked to the QoL of those in their immediate vicinity (Lailiyah et al., 2018).

Research by Nurhidayati et al. (2021) shows a relationship between nutritional status and QoL in the elderly treated at Jogonalan 1 Health Center (*p*-value = 0.000), lending credence to the findings presented here. This study was carried out 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***

The chi-square test with a 95% confidence level yielded a  $p$ -value of 0.000 when testing for a relationship between hypertension and physical independence in the elderly. Statistical test results ( $p > 0.05$ ) indicating a correlation between elderly patients' level of autonomy and their quality of life in the physical domain hypertension clinic at Bukit Hindu Public Health Center in Palangka Raya City in April 2022 led researchers to reject the null hypothesis  $H_0$ .

Seventy-five percent of the elderly study participants reported having a low QoL in the physical domain due to their dependence. The percentage of elderly participants reporting a high QoL in the physical domain was 85.71%. This demonstrates that hypertensive seniors with a low QoL in the physical domain are more vulnerable to becoming dependent.

The quality of independence of a child is enhanced if their parents can keep as much control over their life as possible. Improving the health and well-being of the elderly can be achieved by facilitating their continued independence and engagement in routine activities. This is in line with the theory proposed by Miller, who posits that increased parental reliance is linked to diminished quality of life (Supraba & Permata, 2021).

According to the World Health Organization (WHO), four factors contribute to the QoL of the elderly: physical health, psychological well-being, social engagement, and the quality of the natural and built environments in which they live. When it comes to the physical aspects of life, older people's independence of life (QoL) is enhanced when they can complete their daily tasks independently (Ningrum, Chondro, et al., 2019).

Their physical capabilities will inevitably diminish with age. This leads to diminished mobility, instability, and overall effectiveness among the elderly population. The quality of life of the elderly will decline inexorably if they lose more of their independence. Quality of life for the elderly improves when they have more freedom to make decisions and complete tasks.

According to Supraba and Permata (2021), a  $p$ -value of 0.000 indicates that the relationship of independence is significantly related to the QoL of the elderly. The quality of life of the elderly was found to be correlated with their degree of autonomy, according to this study.

***The relationship between independence and QoL in elderly hypertension psychological domain***

The chi-square test with a 95% confidence interval found a  $p$ -value of 0.004 when testing for a relationship between hypertension in the elderly and mobility-related independence. Based on statistical test results ( $p$ -value  $> 0.05$ ), which demonstrated a relationship between elderly independence and quality in the context of psychological domain hypertension at Bukit Hindu Public Health Center in Palangka Raya City, the decision  $H_0$  was rejected.

This research indicates that 66.67% of the elderly with hypertension also experience dependence issues. Conversely, only 82.14% of elderly hypertensive patients report having a high quality of life in the psychological and independent domains.

When older people gain more control over their daily lives, their quality of life improves. The results of other studies support this finding. This study found a strong relationship between parental intelligence and self-sufficiency in providing for one's basic needs. The degree of independence is affected by several factors, one of which is cognitive function. Age-related cognitive decline reduces older people's independence by making it more challenging to walk without a cane or walker. Due to a decline in functional ability, the elderly will become more reliant on others for assistance with routine activities. This dependence has an effect by making parents less likely to engage in healthy behaviors. If it persists for a long time, it will raise morbidity and mortality rates and reduce the quality of life for the elderly (Supraba & Permata, 2021).

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

The chi-square test with a 95% confidence level is used with the  $p$ -value to determine if hypertensive seniors have a lower level of autonomy and quality of life in their interpersonal relationships. After some investigation, we determined that 0.005 is the domain of the relationship. The decision  $H_0$  was rejected ( $p$ -value= 0.05) based on the statistical test results, suggesting a correlation between autonomy and the quality of life among elderly patients diagnosed with hypertension at the Bukit Hindu. Public Health Center in Palangka City. The outcomes of statistical

analyses are used to reach this conclusion.

This research found that 75% of the elderly with hypertension with low quality of life (QoL) in their social relationships depended on others. In comparison, 75% of the elderly with hypertension with high QoL in their social relationships depended on others. People over 65 with hypertension who their peers socially support report a higher quality of life, which positively impacts the QoL of those over 65 (Rahayu & Khairani, 2020).

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

The *p*-value for the chi-square test examining the correlation between hypertension in the elderly and other factors, like mobility and quality of life in the social relationships domain, was less than 0.002 at the 95% confidence level. Results from statistical tests at Bukit Hindu Public Health Center, Palangka Raya City, in April 2022 indicated a relationship between elderly hypertension patient's level of independence and the quality of their surrounding environment, so the decision  $H_0$  was rejected based on this data. Since *p*-value was less than 0.05, we can draw this conclusion.

75% of the hypertensive elderly in this study are dependent and have a low quality of life in the environmental domain. In comparison, 78.57% have a high quality of life in this area despite having hypertension. How a person can improve the environment around them is part of the "environmental domain," which also includes the influence of norms and expectations in shaping behavior. Seniors' quality of life (QoL) will suffer without proper support from family and friends.

### **Multivariate Analysis**

Evaluation of the Association between Anxiety, Nutritional Status, and Independence on Elderly Hypertension Quality of Life in the Workplace at the Bukit Hindu Public Health Center in Palangka Raya City.

The statistical analysis results indicate a connection between one variable and the physical component of older people's QoL who have hypertension. A 0.004 significance level indicates that this independent variable significantly differs from all other variables. For the elderly population, hypertension in the physical domain has an Exponent Beta (Exp. B) of 15,791, indicating a strong relationship between independence and QoL. This demonstrates that the quality of life of elderly hypertensives can be enhanced by increasing a person's level of physical independence by a factor of 15,791.

The physical domain includes activities of daily living, drug and medical assistance dependence, fatigue and energy levels, mobility, pain and discomfort, rest and work, and work capacity (Nurhayati, Rahayuningsih, & Alifiar, 2021).

Quality of life (QoL) is considered high if all aspects of a person's health (bodily, mental, and social) thrive. Factors affecting seniors' quality of life include their bodies, communities, minds, and surroundings. An individual's level of physical health is correlated with their ability to carry out ADL, also known as the elderly's capacity to perform basic activities of daily living. As a result of their improved physical health, the elderly in good physical condition will also enjoy a greater degree of ADL independence, improving their quality of life. If an older person's physical health declines, it becomes possible for others to rely on them to carry out routine activities. As a result of this relationship, the elderly will be able to get by with a lower quality of life (Supraba & Permata, 2021).

In the Bukit Hindu Public Health Center workplace in Palangka Raya City, a correlation was found between anxiety, nutritional status, and autonomy of elderly hypertensive patients, all of which contributed to a lower quality of life.

One factor in the psychological domain is related to the quality of life of the elderly with hypertension, according to the results of statistical studies. As the independent variable, its significance level of 0.013 has been established. There is 10,650 in the Beta Exponent Value (Exp. B), a measure of the joint's stability. Psychological QoL of older people with hypertension is shown to be significantly correlated with their relationship to independence, as depicted in this figure. The results demonstrate a 10,650-fold increase in the psychological domain of QoL for older people with hypertension who can live independently.

WHOQOL-Bref measures many aspects of mental health. Considerations such as how one sees oneself, how one feels about oneself, one's sense of self-worth, one's core beliefs, and one's capacity for rational thought, for example, or sustained attention and memory, are all part of this psychological sphere (Nurhayati et al., 2021).

An overwhelming majority (82.5%) of the survey's participants were women. There is a link between a person's gender and their degree of independence in old age, as suggested by [Rahayu and Khairani \(2020\)](#). This gender gap in autonomy between older women and men is expected to widen as baby boomers live longer ([Rahayu & Khairani, 2020](#)). As a result, one's mental health plays a pivotal role in shaping their QoL. The elderly residents of the Bukit Hindu Community Health Center area are known to take every opportunity to count their blessings, express gratitude, and recognize their good fortune when compared to the plight of others. Findings from the survey corroborate this, revealing that the majority of UPT PSLU Jember's elderly citizens enjoy a high quality of life (QoL) based on their mental health.

Quality of Life among Elders with Hypertension: Mediating Role of Anxiety, Nutritional Stability, and Autonomy in the Workplace at Bukit Hindu Public Health Center, Palangka Raya City.

The findings of the statistical analyses point to the importance of older people's social relationships to their overall quality of life with hypertension. There is a statistically significant relationship between the dependent and independent variables, with the independent variable as the  $p = 0.016$ . In the relationship of social relationships, the Beta Exponential Value (Exp. B), which measures the strength of a relationship, is 9,200. A high hypertension relationship is strongly correlated with decreased independence in the elderly, as shown by this statistic. Conclusion: Elders with hypertension in their social relationships can benefit from greater autonomy by a factor of 9,200.

According to the data, 70% of the respondents fell into the "independent" category when asked how much independence they had to make their own decisions. This is because most respondents (42.50%) are between the ages of 60 and 64, which corresponds to the demographic of the elderly who can still tolerate performing most daily tasks without assistance. However, as they age, they are more likely to require assistance from others for a more extended period to fulfill their basic needs ([Rahayu & Khairani, 2020](#)). Interactions involving three or more people, in which one person's actions may alter, improve, or influence the actions of others, fall under the rubric of "the social domain" ([Nurhayati et al., 2021](#)).

The Bukit Hindu Public Health Center, Palangka Raya City, Environmental Domain Relationship of Anxiety, Nutritional Status, and Independence with Elderly Hypertension Quality of Life.

The statistical analysis revealed a relationship between the quality of life of older adults with hypertension and two environmental variables. Nutritional status ( $p = 0.029$ ) and control variables ( $p = 0.038$ ) were the variables in question. Seniors with hypertension report that their nutritional status is even more of a predictor of QoL than their level of independence. This holds whenever two criteria are being compared. The strength of the relationship between nutritional status and QoL in the environmental domain of hypertension in the elderly is expressed by a value of 7.204 for the exponential beta coefficient. This demonstrates that, when considering environmental factors, an increase in nutritional status by a factor of 7,204 can improve the quality of life for the elderly with hypertension. Although the Exp. B value of 6.831, which measures the strength of the relationship between independence and QoL of parents with hypertension in the environmental domain, is impressive. It is important to note that this value only applies to the environmental domain. This demonstrates independence that is 6,831 times greater than average and can potentially boost the environmental QoL of older people hypertension.

Conditions, the availability of a place to live to carry out all life activities, and facilities and infrastructure supporting life are all part of the individual's environment ([Nurhayati et al., 2021](#)). The health of the population depends in large part on the state of the Bukit Hindu Health Center. A peaceful, relaxed, and pleasant atmosphere is essential for residents to feel a sense of community and want to stay in their current location. The environment will act as a safety net for the elderly, allowing them to enjoy a high quality of life.

An abnormal diet, such as being underweight or overweight, increases the risk of functional decline in the elderly. Malnutrition has multiple root causes, including economic hardship and health issues. For instance, consuming fewer calories than are required for maintaining body weight can lead to lower-than-average body weight. Let's pretend a protein shortage accompanies this. In that case, it will cause irreversible cell damage, resulting in hair loss, decreased immunity, and even infection.

People of a certain age in large urban areas are disproportionately overweight. Being overweight is more common in older people who overeat as children. Our bodies naturally burn fewer calories when we get older because we move less. They know they need to reduce their caloric intake, but they find it challenging to make the

necessary changes. Multiple diseases have been linked to obesity and being overweight. Cardiovascular disease, diabetes, and hypertension are just a few examples. People who were malnourished or obese in later life were reported to have a lower quality of life, especially in terms of their physical ability and general physical well-being (Awaru & Bahar, 2021).

Conclusions from this study indicate a correlation between environmental autonomy and QoL in hypertensive older adults. According to this line of thinking, one thing that determines the quality of life is a person's degree of autonomy or the extent to which they can take care of themselves and achieve their goals without outside help. Independence is "the ability or situation in which individuals manage or overcome their interests without depending on others" (Sumbara, Mauliani, & Puspitasari, 2019).

## CONCLUSION

Research conducted at the Bukit Hindu Public Health Center in Palangka Raya City, Indonesia, found no correlation between elderly patients' levels of anxiety and their quality of life across physical, psychological, social, and environmental dimensions. The analysis supports this conclusion ( $p$ -value less than 0.05) at the Bukit Hindu Public Health Center in Palangka Raya City. At the same time, there is no relationship between nutritional status and the QoL of older people with hypertension regarding their physical health, mental health, or social relationships. To put it simply, the domain ( $p > 0.05$ ). Researchers at the Bukit Hindu Public Health Center in Palangka Raya City found a statistically significant ( $p = 0.05$ ) relationship between the independence with which elderly patients could care for themselves and their QoL across the physical, psychological, social, and environmental domains. In the physical, psychological, and social domains, the independent variable is the most important factor affecting the QoL of the elderly with hypertension. At the same time, nutritional status is the most important factor affecting QoL. Elderly hypertension sufferers face several challenges in the natural world.

The findings of this study will add to the body of knowledge and serve as a starting point for additional investigations into this topic.

Due to the small sample size, this study can only be generalized to the immediate area. Future studies should conduct their research in a larger geographical area to draw a universal conclusion.

## REFERENCES

- Annisa, D. F., & Ifdil, I. (2016). The concept of anxiety (anxiety) in the elderly (elderly). *Konselor*, 5(2), 93-99. doi:<https://doi.org/10.24036/02016526480-0-00>
- Awaru, A. F. T., & Bahar, B. (2021). Overview of nutritional status and quality of life of elderly in rural area. *Gorontalo Journal of Nutrition and Dietetic*, 1(1), 22-29.
- Azizah, R., & Dwi Hartanti, R. (2016). *Relationship between stress level and quality of life for hypertensive elderly in the work area of wonopringgo health center Pekalongan*. STIKES Muhammadiyah Pekajangan. Retrieved from <https://bit.ly/3sW2WS0>
- Dzakiyyah, N. F. (2019). *The relationship between anxiety levels and quality of life in the elderly in Penanggungan Village, Malang* (Phd thesis). Universitas Brawijaya, Malang, Indonesia.
- Gabriel, Z., & Bowling, A. (2004). Quality of life from the perspectives of older people. *Ageing & Society*, 24(5), 675-691. doi:<https://doi.org/10.1017/S0144686X03001582>
- Health Research and Development Agency. (2018). *Basic health research*. Retrieved from <https://bit.ly/2OVLrAq>
- Jam, F. A., Akhtar, S., Haq, I. U., Ahmad-U-Rehman, M., & Hijazi, S. T. (2010). Impact of leader behavior on employee job stress: Evidence from Pakistan. *European Journal of Economics, Finance and Administrative Sciences*, 21, 172-179.
- Lailiyah, P. I., Rohmawati, N., & Sulistiyani, S. (2018). Status gizi dan kualitas hidup lansia yang tinggal bersama keluarga dan pelayanan sosial tresna werdha (nutritional status and quality of life of elderly people who's lived with family and tresna werdha social service in Bondowoso). *Pustaka Kesehatan*, 6(1), 60-67. doi:<https://doi.org/10.19184/pk.v6i1.6768>
- Leo, A. A. R., & Kedo, R. V. (2021). nalysis of nutritional status, anxiety levels, age, and blood sugar levels with quality of life of type 2 diabetes mellitus patients. *Jurnal Ilmiah Gizi Kesehatan (JIGK)*, 2(02), 1-6. doi:<https://doi.org/10.46772/jigk.v2i02.449>

- Meiner, S. E. (2006). *Gerontologic nursing*. Philadelphia, PA: Mosby.
- Mi-Youn, C. (2019). The effects of nursing college student's mentoring activity on their college life adaptability and learning attitude. *Space weather innovation competition for school students in Malaysia. International Journal of Humanities, Arts and Social Sciences*, 1(2), 70-74. doi:<https://dx.doi.org/10.20469/ijhss.5.10004-1>
- Ningrum, B. P., Chondro, F., et al. (2019). The relationship between the level of independence and fitness with the quality of life of the elderly. *Jurnal Biomedika dan Kesehatan*, 2(4), 138-143. doi:<https://doi.org/10.18051/JBiomedKes.2019.v2.138-143>
- Nurchayati, S. (2016). Relationship of anxiety with quality of life of chronic kidney disease patients undergoing hemodialysis. *Jurnal Keperawatan Jiwa (JKJ): Persatuan Perawat Nasional Indonesia*, 4(1), 1-6. doi:<https://doi.org/10.26714/jkj.4.1.2016.1-6>
- Nurhayati, A., Rahayuningsih, N., & Alifiar, I. (2021). Analysis of Quality of Life (QoLY) and therapeutic compliance in pulmonary tuberculosis patients at hospital X Tasikmalaya city. *Journal of Pharmacopolium*, 3(3), 183-189. doi:<http://dx.doi.org/10.36465/jop.v3i3.659>
- Nurhidayati, I., Suciana, F., & Septiana, N. A. (2021). Nutritional status associated with quality of life for the elderly at the Jogonalan Health Center i. *Jurnal Keperawatan dan Kesehatan Masyarakat Cendekia Utama*, 10(2), 180-191. doi:<https://doi.org/10.31596/jcu.v10i2.764>
- Nursilmi, N., Kusharto, C. M., & Dwiriani, C. M. (2017). Relationship of nutritional status and health with quality of life of elderly in two different locations. *Media Kesehatan Masyarakat Indonesia Universitas Hasanuddin*, 13(4), 369-379. doi:<https://doi.org/10.30597/mkmi.v13i4.3159>
- Rahayu, A., & Khairani, K. (2020). Relationship of ladd independence level with quality of life in Pango Raya Village. *Idea Nursing Journal*, 11(3), 12-20.
- Ran, L., Jiang, X., Li, B., Kong, H., Du, M., Wang, X., ... Liu, Q. (2017). Association among activities of daily living, instrumental activities of daily living and health-related quality of life in elderly Yi ethnic minority. *BMC Geriatrics*, 17(1), 1-7. doi:<https://doi.org/10.1186/s12877-017-0455-y>
- Ratnaningrum, D. P. S. Y., Setyaningrum Rahmawaty, A., Rahmawati, T., & Gz, S. (2015). *Relationship of fiber intake and nutritional status with blood pressure in postmenopausal women in Kuwiran Village, Banyudono District, Boyolali Regency* (Phd thesis). Universitas Muhammadiyah Surakarta, Jawa Tengah, Indonesia.
- Rerkklang, P. (2018). Sustainability development consciousness and behavior of Thais: The effects on quality of life and happiness. *Journal of Advances in Humanities and Social Sciences*, 4(1), 51-59. doi:<https://doi.org/10.20474/jahss-4.1.5>
- Rizal, H., Said, M. A., Abdul Majid, H., Su, T. T., Maw Pin, T., Ismail, R., & Shah Zaidi, M. A. (2022). Health-related quality of life of younger and older lower-income households in Malaysia. *Plos One*, 17(2), 1-15.
- Saftarina, F., & Rabbaniyah, F. (2016). The relationship of elderly gymnastics to quality of life of elderly suffering from hypertension at Kedaton Private Clinic Bandar Lampung. *Jurnal Kesehatan*, 7(3), 492-496. doi:<http://dx.doi.org/10.26630/jk.v7i3.234>
- Shahbaz, M., Sherafatian-Jahromi, R., Malik, M. N., Shabbir, M. S., & Jam, F. A. (2016). Linkages between defense spending and income inequality in Iran. *Quality & Quantity*, 50(3), 1317-1332.
- Silva e Farias, I. P., Montenegro, L. d. A. S., Wanderley, R. L., de Pontes, J. C. X., Pereira, A. C., de Almeida, L. d. F. D., & Cavalcanti, Y. W. (2020). Physical and psychological states interfere with health-related quality of life of institutionalized elderly: A cross-sectional study. *BMC Geriatrics*, 20(1), 1-10. doi:<https://doi.org/10.1186/s12877-020-01791-6>
- Soni, R. K., Porter, A. C., Lash, J. P., & Unruh, M. L. (2010). Health-related quality of life in hypertension, chronic kidney disease, and coexistent chronic health conditions. *Advances in Chronic Kidney Disease*, 17(4), e17-e26. doi:<https://doi.org/10.1053/j.ackd.2010.04.002>
- Sumbara, Mauliani, R., & Puspitasari, S. (2019). The relationship between the level of independence and the quality of life of the elderly. *Jurnal Keperawatan*, 3(2), 120-132.
- Supraba, N. P., & Permata, T. R. (2021). Relationship of independence level with quality of life of elderly in working area of Kelapa Health Center, West Bangka Regency. *Jurnal Kesehatan Poltekkes Kemenkes RI*

- Pangkalpinang*, 9(1), 42-49. doi:<https://doi.org/10.32922/jkp.v9i1.296>
- Waheed, M., Klobas, J. E., & Ain, N. (2020). Unveiling knowledge quality, researcher satisfaction, learning, and loyalty: A model of academic social media success. *Information Technology & People*, 34(1), 204-227. doi:<https://doi.org/10.1108/ITP-07-2018-0345>
- Widiana, I. M. R., & Ani, L. S. (2017). Prevalence and characteristics of hypertension in the elderly and the elderly in Dusun Tengah, Ulakan Village, Manggis District. *E-Jurnal Medika*, 6(8), 1-5.
- Yuniarsih, S. M., Nugroho, S. T., & Hasanah, N. (2021). A study of anxiety and quality of life for the elderly in the Covid-19 pandemic period. *Jurnal Keperawatan Jiwa (JKJ): Persatuan Perawat Nasional Indonesia*, 9(4), 887-892. doi:<https://doi.org/10.26714/jkj.9.4.2021.887-892>