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THE RELATIONSHIP BETWEEN THE DURATION OF HYPERTENSION AND ANXIETY AMONG HYPERTENSIVE PATIENTS IN THE SERVICE AREA OF THE LEMBO COMMUNITY HEALTH CENTER NORTH KONAWE REGENCY

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ABSTRACT

Hypertension is a chronic condition that is common among adults and is often associated with various psychological issues, including anxiety levels. As a chronic condition, the longer a person has hypertension, the higher their anxiety levels tend to be. This condition can affect patients' psychological well-being, adherence to treatment, and quality of life if not managed properly. Given these circumstances, this study aims to examine the association between the duration of hypertension and anxiety levels among adult patients at the Lembo Community Health Center. This is a quantitative study using a cross-sectional study design. The study involved 59 respondents selected through cluster sampling. Data were collected using the Zung Anxiety Scale to assess anxiety levels and were analyzed using the chi-square test. The findings showed a significant relationship between the duration of hypertension and anxiety levels, with a p-value of 0.000 ($p < 0.05$). These findings suggest that a longer duration of hypertension may contribute to a higher risk of anxiety among adult patients. The results of this study underscore the importance of long-term management of chronic diseases, particularly hypertension, as a means to reduce the risk of anxiety in adult patients and to support the provision of more comprehensive healthcare services that address both physical and psychological aspects.

Keywords: *Chronic disease, hypertension, duration of hypertension, anxiety level, adult patients*

INTRODUCTION

Hypertension is a long-term condition characterized by consistently high blood pressure. It is important to understand this condition because it can increase the risk of serious diseases, such as heart disease, brain disorders, and kidney damage, as well as other health problems. Therefore, maintaining normal blood pressure is essential to prevent complications. Globally, hypertension is one of the leading causes of premature death, affecting an estimated 1.4 billion adults aged 30–79 years (WHO, 2024). The American Heart Association defines hypertension as having a systolic blood pressure greater than 130 mmHg and/or a diastolic blood pressure above 80 mmHg (Carey et al., 2018). In Indonesia, approximately 51.3 million adults aged 30–79 years have been diagnosed with hypertension, representing a substantial proportion of global cases (WHO, 2023). These figures highlight that hypertension remains highly prevalent both worldwide and in Indonesia. However, data from the Indonesian Health Survey (SKI) show a slight improvement, with prevalence declining from 34.1% in 2018 to 30.8% in 2023 among

individuals aged 18 years and older (Kementerian Kesehatan RI, 2023). Therefore, hypertension must remain an ongoing concern for every individual.

Hypertension, also known as high blood pressure and often referred to as the "silent killer" is a condition that can affect people of all ages, particularly the elderly (>60 years) and those of working age (18–59 years) (Kementerian Kesehatan RI, 2023). Hypertension is linked to structural changes in the arteries. As part of the aging process, blood vessels tend to narrow and their walls become stiffer due to a condition known as atherosclerosis, which leads to structural changes including an increase in vascular stiffness resulting in earlier reflection of pressure waves during the propagation of blood pressure waves. These pressure waves travel back from the aortic root during systole, contributing to a rise in systolic blood pressure (Singh et al., 2023).

Most individuals with hypertension do not experience noticeable symptoms. However, when blood pressure becomes very high, it may lead to headaches, blurred vision, chest pain, irregular heart rhythms, and even anxiety (WHO, 2024). Anxiety itself is one of the most common categories of mental disorders, with a global prevalence of about 7.3%, contributing to approximately 3.3% of the overall global disease burden (Craske & Stein, 2016). Anxiety is a subjective feeling of distressing mental tension that serves as a general reaction to an inability to cope with a problem or a lack of a sense of security. These generally unpleasant, unsettling feelings can cause or be accompanied by physiological and psychological changes (Setyawan, 2017).

Anxiety is more frequently observed in individuals with hypertension, and the two conditions often coexist. Research has shown a positive relationship between hypertension and anxiety, indicating that patients with hypertension are more likely to experience anxiety due to their condition (Qiu et al., 2023). Another study also identified a correlation between the duration of hypertension and anxiety levels among patients in Grogol Village, with a Kendall's tau value of 0.417, suggesting a moderate association between longer illness duration and increased anxiety (Suciana et al., 2020). Anxiety is also linked to the duration of a patient's hypertension because when patients become aware of hypertension symptoms, they experience feelings of worry and vigilance (Rahayu & Wahyuni, 2023). Furthermore, hypertension is a condition that leads to several complications, such as stroke, heart failure, and kidney failure (Nawata, 2023). This is what causes people with hypertension to feel anxious about their condition.

Several approaches can help reduce anxiety in patients with hypertension. These include providing education on managing hypertension as a chronic disease (Febiola & Hudiawati, 2024), strengthening patients' self-management skills, applying stress-management techniques such as deep-breathing relaxation or mindfulness (Irawan et al., 2024), and involving the family in the care process (Mariyani et al., 2021). Regular anxiety screening at the primary care level should also be considered, so that patients at risk of psychological problems can be identified and given earlier intervention (Unger et al., 2020). Hypertension has not only physiological effects but also psychological ones, particularly anxiety. The anxiety that hypertensive patients experience can activate the sympathetic nervous system, which worsens blood pressure control, lowers adherence to

medication and lifestyle changes, hinders patients' ability to manage their condition independently, increases the risk of cardiovascular complications, and reduces quality of life (Qiu et al., 2023).

This study was conducted in the service area of the Lembo Community Health Center in North Konawe Regency because that health center recorded the highest number of patients with hypertension. These data indicate that the service area of the Lembo Community Health Center carries a relatively high burden of hypertension cases, and therefore requires greater attention and more optimal management efforts to prevent complications and psychosocial effects on the community, including anxiety arising from this chronic disease. The findings are expected to provide local evidence for integrating anxiety screening into routine hypertension services at community health centers, and to deepen the understanding of hypertension as a chronic condition with a significant mental health dimension, particularly in primary care settings with limited resources.

Based on preliminary observations, the number of patients with hypertension was found to increase each year. Simple interviews and discussions were conducted with 21 hypertensive patients, and most of them revealed that they had been living with hypertension for a considerable time, which left them feeling anxious about their condition. They reported taking their medication, although they sometimes forgot, and often still followed certain restrictions advised by their doctor, such as reducing salt intake. The anxiety they experienced stemmed from a fear of the complications that hypertension might cause. Anxiety is therefore an important aspect to consider in the management of patients with hypertension. Although the link between hypertension and anxiety has been well established, there is still limited evidence on how the duration of hypertension influences anxiety levels, particularly among adult patients in primary care settings. Therefore, this study was conducted to determine the association between the duration of hypertension and anxiety levels among adult patients with hypertension at the primary care level in North Konawe Regency.

RESEARCH METHOD

This study was conducted in the service area of the Lembo Community Health Center, North Konawe Regency, from April 2 to May 11, 2024. This study used a quantitative approach with a cross-sectional design to examine the relationship between the duration of hypertension and anxiety levels in patients with hypertension. Sampling was conducted using *cluster sampling*, and the sample size was calculated using Lemeshow's formula. The study population consisted of 145 individuals, and the sample size was set at 59 participants based on *clusters* within the service area of the Lembo Community Health Center. The researchers established the following inclusion criteria: patients who have had hypertension, are able to communicate, read, and write well, are 50 years of age or older, and are willing to participate. Meanwhile, the exclusion criteria were patients who were uncooperative and unwilling to participate.

The instruments used in this study included an observation sheet that contained respondents' identifying information, such as initials, age, gender, occupation highest

level of education, and marital status. Furthermore, the questionnaire used was based on the *Zung Self-Rating Anxiety Scale. The Zung Anxiety Rating Scale* (SAS) is an instrument for measuring anxiety levels. Scores range from 1 to 4, where a score of 4 indicates a negative response, with the following rating scale: never (1), sometimes (2), often (3), always (4). Respondents completed the questionnaire by checking the appropriate box corresponding to their response. Before distributing the questionnaire, the researcher first explained the purpose of this study and sought the respondents' consent. After the respondents completed the questionnaire, it was collected and checked for completeness by the researcher for further processing and analysis. The validity test results showed calculated r values ranging from 0.663 to 0.918, which are higher than the table r value (0.374), so all items were deemed valid. The reliability test results showed a *Cronbach's Alpha* value of 0.829 (>0.6), indicating that this instrument is reliable.

The data were analyzed using the Chi-square test, as the data were ordinal and not normally distributed. This test was applied to examine the relationship between the duration of hypertension and anxiety levels in patients with hypertension.

RESULT AND DISCUSSION

Characteristics of Respondent

The characteristics of the respondents in this study include age, gender, highest level of education, and occupation. An explanation of these characteristics is important to provide an overview of the profiles of the respondents involved in the study and to support the interpretation of the analysis results. Data were collected from 59 respondents who met the inclusion criteria and were willing to participate in the study. The following section presents a breakdown of the respondents' characteristics.

Table 1. Characteristics of Respondents by Gender, Age, Highest Level of Education, and Occupation

Respondent Characteristics	n	%	Respondent Characteristics	n	%
			Highest Level of Education		
Gender			Elementary	11	18,6
Men	29	49,2	School/equivalent	32	54,2
Women	30	50,8	Middle School/equivalent		
			High School/equivalent	16	27,2
Total	59	100	Total	59	100
			Ocupation		
Age			Wiraswasta	8	13,6
50-55	28	47,5	Petani	21	35,6
56-60	31	52,5	IRT	30	50,8
Total	59	100	Total	59	100

Table 1 illustrates the demographic characteristics of the 59 respondents, broken down by gender, age, highest level of education, and occupation. Of the respondents, 50.8% were women and 49.2% were men. In terms of age, the majority of respondents

were between 56 and 60 years old (52.5%), while the remaining 47.5% were between 50 and 55 years old. Regarding education, the majority of respondents had a junior high school education (54.2%), followed by those with a senior high school education (27.1%), and those with an elementary school education (18.6%). Based on occupation, 50.8% of respondents were homemakers, 35.6% were farmers, and 13.6% were self-employed. Overall, this table provides an overview of the respondents' demographic profile, with the majority being women, having a junior high school education, aged 56–60 years, and working as homemakers.

The duration of a respondent's hypertension may influence their psychological state, particularly anxiety. Table 2 below presents the frequency distribution of respondents based on the duration of their hypertension and anxiety.

Table 2. Frequency Distribution of Respondents Based on Duration of Hypertension and Anxiety Level

Variable	**n**	**%**
Duration of Hypertension		
<5 years	34	57,6
>5 years	25	42,4
Total	59	100
Anxiety Level		
Anxious	26	44,1
Not Anxious	33	55,9
Total	59	100

Table 2 above illustrates the frequency distribution of respondents based on the duration of their hypertension and their anxiety levels. Regarding the duration of hypertension, the majority of respondents—57.6%—had had hypertension for less than 5 years, while 42.4% had had hypertension for more than 5 years. Meanwhile, regarding anxiety, more than half of the respondents did not experience anxiety (55.9%), while 44.1% did experience anxiety. Overall, these data indicate that more than half of the respondents have had hypertension for less than 5 years and more than half do not experience anxiety.

Table 3 below presents the results of a correlation analysis between the duration of hypertension and anxiety in the service area of the Lembo Community Health Center. This analysis aims to determine whether there is a significant relationship between these two variables. The following are the details of the correlation analysis results.

Table 3. Analysis of the Relationship Between Duration of Hypertension and Anxiety in the Service Area of the Lembo Community Health Center

Duration of Hypertension	**Anxiety**				**Total**		**Analisis statistic**
	Not Anxious		**Anxious**				
	n	%	n	%	n	%	
<5 years	26	76.5	8	23.5	34	100,0	*p* value =
>5 years	0	0	25	100	25	100,0	0,000

Total	26	76,5	33	55,9	59	100,0

Table 3 shows that of the total 59 respondents, 34 had been living with hypertension for <5 years, and 8 experienced anxiety. Meanwhile, 25 respondents had been living with hypertension for >5 years, and 25 experienced anxiety. This indicates that a greater number of respondents who had lived with hypertension for more than five years experienced anxiety. Based on the data analysis using the Chi-Square test, the chi-square value (χ^2) was 34.180 with a p-value of 0.000 ($p < 0.05$); therefore, H0 was rejected and Ha was accepted. By identifying a longer duration of hypertension as a marker of higher anxiety, clinicians can direct psychological screening and support toward patients who have lived with the condition for several years, which in turn supports better adherence and more effective overall management. It can therefore be concluded that there is a significant relationship between the duration of hypertension and anxiety in the service area of the Lembo Community Health Center, North Konawe Regency.

As we age, various declines in bodily function occur as a natural part of the aging process. The aging process brings about a range of changes, including physical, psychological, and psychosocial changes. Physiologically, the immune system's ability to combat internal and external threats declines. One of the most common health issues associated with aging is cardiovascular disease, characterized by the narrowing of blood vessels, which impedes blood flow and can potentially raise blood pressure. As we age, the risk of various diseases whether caused by internal or external factors also increases (Ahmed et al., 2024). In this study, more than half of the respondents aged 56–60 suffered from hypertension.

The results of this study indicate that there is a relationship between the duration of hypertension and anxiety, with a *p-value of 0.000* (<0.05). According to the researchers, this is because respondents who have had hypertension for a long time are at risk of developing various complications. Consequently, as blood pressure tends to rise with age, the duration of hypertension can lead to a more significant decline in quality of life, resulting in increased anxiety in older adults. Previous studies also support the finding that anxiety is significaSntly associated with the duration of a patient's hypertension (Rahayu & Wahyuni, 2023). The results of the same study also show that there is a significant association between the duration of hypertension and anxiety (Weo et al., 2022).

Anxiety is a pervasive and vague feeling of worry characterized by uncertainty and helplessness, often without a specific object or cause. Anxiety is generally a subjective emotional state manifested through sensations of tension, worry, and fear, which are typically accompanied by physiological changes such as an increased heart rate, changes in breathing, and fluctuations in blood pressure. Anxiety can be described as an affective disorder characterized by persistent and excessive fear or worry, while reality testing remains intact and the individual's personality structure is generally preserved, although emotional balance may be temporarily disrupted within normal limits (Chand & Marwaha, 2023).

Anxiety in patients with long-standing hypertension is a fairly common psychological condition that can be caused by various factors, including age, gender, lifestyle, and environment (Qiu et al., 2023). The relationship between hypertension and anxiety is mutually reinforcing. Based on the results of longitudinal studies and theoretical reviews, anxiety is known to play a role as one of the etiological factors in the development of hypertension (Lim et al., 2021). Individuals with hypertension tend to be more prone to anxiety, either as a result of their medical condition or due to suboptimal treatment effectiveness (Hamam et al., 2020).

The results of the study showed that among respondents who had had hypertension for less than 5 years, 8 experienced anxiety, while 25 respondents had had hypertension for more than 5 years. Previous research supports the finding that hypertension can impact mental health. One study found that individuals with long-term hypertension experienced significantly higher levels of anxiety compared to those without hypertension. The study indicates that feelings of anxiety are closely linked to concerns about health complications and treatment side effects (Wang et al., 2023). Other findings also indicate that adult patients with hypertension experience anxiety, which is associated with the stage of hypertension, uncontrolled blood pressure, obesity, and being female (Kandasamy et al., 2025).

Another finding in our study was that a higher proportion of female respondents experienced anxiety compared to male respondents. This is consistent with a study conducted on adult patients with hypertension, which showed an association between female patients and anxiety (Hamrah et al., 2018). Female patients are 4.25 times more likely to experience anxiety than male patients among those with hypertension (Aberha et al., 2016). This association may be explained by the link between anxiety and hormonal changes that occur during pregnancy, after childbirth, and during menopause (Russell et al., 2013).

A study also emphasized the importance of social support in reducing anxiety among patients with hypertension. The researchers found that adequate social support can help reduce anxiety levels by providing a sense of control and the necessary emotional support (Abdisa et al., 2022). Another study also indicates that individuals who have had hypertension for a long time more than 5 years due to an unhealthy lifestyle and irregular eating habits will experience higher levels of anxiety regarding their condition (Aprillia, 2020). Overall, various previous studies reinforce our findings and show that the relationship between disease duration and anxiety remains consistent across different settings and populations, while the present study extends this evidence to the primary care level in North Konawe, an area that previously lacked such data.

Hypertension and anxiety have a reciprocal relationship. On one side, anxiety can contribute to the onset and worsening of hypertension and increase the likelihood of cardiovascular diseases. On the other side, hypertension can also intensify feelings of anxiety (Pan et al., 2015). Beyond confirming the association reported elsewhere, this study provides evidence that was previously unavailable at the local level. To our knowledge, this is the first study at the primary health care level in Konawe Utara District

to examine the association between hypertension duration and anxiety in a population bearing a high hypertension burden yet with scarce data on its psychological dimension. The finding that patients with longer hypertension duration reported significantly higher anxiety levels is consistent with prior evidence demonstrating a significant relationship between anxiety and hypertension in adult populations (Lim et al., 2021), as well as reports indicating that a longer disease duration contributes to increased psychological distress among hypertensive patients in primary care (Loke & Ching, 2022).

At the local level, these findings provide a basis for the primary health center (*puskesmas*) to integrate standardized anxiety screening and psychological counseling into routine hypertension care protocols, enabling the earliest identification of at-risk patients and timely intervention. Nevertheless, the implications extend beyond the local context and contribute to three globally relevant aspects of primary health care strengthening. First, these results reinforce the urgency of integrating mental health assessment into hypertension management across primary care settings. Second, the findings add to the evidence base for improving the quality of chronic disease services through a comprehensive biopsychosocial approach, particularly in low- and middle-income countries with limited resources, where hypertension management often remains fragmented from its psychological dimension (Di Giacomo et al., 2024). Third, the findings underscore the importance of a care paradigm that recognizes the interconnection between patients' physical and mental health, consistent with the high prevalence of psychological comorbidity in hypertension reported by recent studies (Dutta et al., 2024). Accordingly, this study not only offers a practical solution at the primary health center level but also contributes to the transformation of chronic disease care models at the regional and global levels.

CONCLUSION

This study demonstrates a significant relationship between the duration of hypertension and anxiety levels in adult hypertensive patients in the working area of Puskesmas Lembo, Konawe Utara District (chi-square test: $p = 0.000$). The findings indicate that longer hypertension duration is associated with higher anxiety levels among patients. Specifically, patients with long-term hypertension (>5 years) demonstrated significantly higher anxiety levels compared to those with short-term duration (<5 years). The greater anxiety observed in the long-term hypertension group is likely attributable to persistent concerns regarding potential health complications, treatment efficacy, and the long-term consequences of the disease. Conversely, although patients with shorter disease duration also experience anxiety, their anxiety intensity remains relatively lower. Based on these findings, the following recommendations are proposed: (1) family members are encouraged to provide motivation and support to help patients maintain blood pressure control and implement healthy dietary practices and regular physical exercise; (2) patients are advised to actively manage their hypertensive condition through routine health examinations and adherence to medical recommendations to minimize psychological

impact; and (3) patients experiencing anxiety should seek professional psychological support and medical consultation to ensure optimal management of their condition.

REFERENCES

Abdisa, L., Letta, S., & Nigussie, K. (2022). Depression and anxiety among people with hypertension on follow-up in Eastern Ethiopia: A multi-center cross-sectional study. *Frontiers in Psychiatry*, *13*, 853551. https://doi.org/10.3389/fpsyt.2022.853551

Aberha, M., Gebeyehu, A., & Ayano, G. (2016). Prevalence and Factors Associated with Anxiety among Patients with Hypertension on Follow Up at Menelik-II Referral Hospital, Addis Ababa. *Journal of Psychiatry*, *19*(4), 1000378. https://doi.org/10.4172/2378-5756.1000378

Ahmed, B., Rahman, A. A., Lee, S., & Malhotra, R. (2024). The Implications of Aging on Vascular Health. *International Journal of Molecular Sciences*, *25*, 11188. https://doi.org/10.3390/ijms252011188

Aprillia, Y. (2020). Gaya Hidup dan Pola Makan Terhadap Kejadian Hipertensi Pendahuluan. *Jurnal Ilmiah Kesehatan Sandi Husada*, *9*(2), 1044–1050. https://doi.org/10.35816/jiskh.v10i2.459

Carey, R. M., Whelton, P. K., Aronow, W. S., Casey, D. E., Collins, K. J., Himmelfarb, C. D., DePalma, S. M., Gidding, S., Jamerson, K. A., Jones, D. W., McLaughlin, E. J., Muntner, P., Ovbiagele, B., Smith, S. C., Spencer, C. C., Stafford, R. S., Taler, S. J., Thomas, R. J., Williams, K. A., … Wright, J. T. (2018). Prevention, detection, evaluation, and management of high blood pressure in adults: Synopsis of the 2017 American College of Cardiology/American Heart Association Hypertension Guideline. *Annals of Internal Medicine*, *168*(5), 351–358. https://doi.org/10.7326/M17-3203

Chand, S., & Marwaha, R. (2023). *Anxiety*. StatPearls Publishing LLC.

Craske, M. G., & Stein, M. B. (2016). Anxiety. *Lancet (London, England)*, 17;388(10063), 3048–3059. https://doi.org/10.1016/S0140-6736(16)30381-6

Di Giacomo, D., Ranieri, J., Guerra, F., Cilli, E., Sciarra, L., & Romano, S. (2024). Cardiovascular risk and biopsychosocial interplay: Association among hypertension, anxiety, and emotional dysregulation-observational study in primary care setting for efficient self-care. *Clinical Cardiology*, *47*(1), e24152. https://doi.org/10.1002/clc.24152

Dutta, A., Chaudhary, V., Gupta, A. K., Murti, K., Kumari, S., Dhir, D., Meenakshi, S., Ahuja, C., Sharma, B., & Pal, B. (2024). Prevalence of depression in hypertensive patients and its associated factors in India: A systematic review and meta-analysis. *Hipertension Riesgo Vascular*, *41*(4), 217–225. https://doi.org/10.1016/j.hipert.2024.05.003

Febiola, S., & Hudiawati, D. (2024). Pengaruh edukasi kesehatan terhadap tingkat kecemasan pada penderita hipertensi di wilayah puskesmas purwantoro. *PREPOTIF: Jurnal Kesehatan Masyarakat*, *8*(1), 1281–1287.

Hamam, M. S., Kunjummen, E., Hussain, M. S., Nasereldin, M., Bennett, S., & Miller, J. (2020). Anxiety, Depression, and Pain: Considerations in the Treatment of Patients with Uncontrolled Hypertension. *Current Hypertension Reports*, *22*(12), 106. https://doi.org/10.1007/s11906-020-01117-2

Hamrah, M. S., Hamrah, M. H., Ishii, H., Suzuki, S., Hamrah, M. H., Hamrah, A. E., Dahi, A. E., Takeshita, K., Yisireyili, M., Hamrah, M. H., Fotouhi, A., Sakamoto, J., & Murohara, T. (2018). Anxiety and Depression among Hypertensive Outpatients in Afghanistan: A Cross-Sectional Study in Andkhoy City. *International Journal of Hypertension*, *2018*(1), 8560835. https://doi.org/10.1155/2018/8560835

Irawan, Ady, A., Anwar, S., Anggraini, D., Nurhayatai, & Khasanah, U. (2024). Efectiveness of Mindfulness in Alleviating Hypertension and Anxiety in Adults Authors: *Jurnal Aisyah: Jurnal Ilmu Kesehatan*, *9*(2), 1014–1021. https://doi.org/10.30604/jika.v9i2.2836

Kandasamy, G., Subramani, T., Almanasef, M., Orayj, K., Shorog, E., Alshahrani, A. M., Alsaab, A., Alshahrani, Z. M., & Palayakkodan, S. (2025). Mental health and hypertension: assessing the prevalence of anxiety and depression and their associated factors in a tertiary care population. *Frontiers in Public Health*, *13*, 1545386. https://doi.org/10.3389/fpubh.2025.1545386

Kementerian Kesehatan RI. (2023). Survei Kesehatan Indonesia (SKI) 2023: Penyakit Tidak Menular. *Buletin Jendela Data Dan Informasi Kesehatan*, 67–87.

Lim, L.-F., Solmi, M., & Cortese, S. (2021). Association between anxiety and hypertension in adults: A systematic review and meta-analysis. *Neuroscience and Biobehavioral Reviews*, *131*, 96–119. https://doi.org/10.1016/j.neubiorev.2021.08.031

Loke, W. H., & Ching, S. M. (2022). Prevalence and factors associated with psychological distress among adult patients with hypertension in a primary care clinic: A cross-sectional study. *Malaysian Family Physician: The Official Journal of the Academy of Family Physicians of Malaysia*, *17*(2), 89–98. https://doi.org/10.51866/oa.131

Mariyani, Azriful, & Bujawati, E. (2021). *Family Support Through Self Care Behavior for Hypertension Patients Dukungan Keluarga Melalui Self Care Behaviour pada Penderita Hipertensi*. *2*(1), 1–8. https://doi.org/10.24252/diversity.v2i1.23180

Nawata, K. (2023). Risk factors for heart, cerebrovascular, and kidney diseases: evaluation of potential side effects of medications to control hypertension, hyperglycemia, and hypercholesterolemia. *Frontiers in Cardiovascular Medicine*, *10*, 1103250. https://doi.org/10.3389/fcvm.2023.1103250

Pan, Y., Cai, W., Cheng, Q., Dong, W., An, T., & Yan, J. (2015). Association between anxiety and hypertension: a systematic review and meta-analysis of epidemiological studies. *Neuropsychiatric Disease and Treatment*, *11*, 1121–1130. https://doi.org/10.2147/NDT.S77710

Qiu, T., Jiang, Z., Chen, X., Dai, Y., & Zhao, H. (2023). Comorbidity of Anxiety and Hypertension: Common Risk Factors and Potential Mechanisms. *International Journal of Hypertension*, *2023*, 9619388. https://doi.org/10.1155/2023/9619388

Rahayu, M. S., & Wahyuni, S. (2023). Prevalence and Factors Associated with Anxiety among Uncontrolled Hypertensive Patients in Public Health Centers in Lhokseumawe, Aceh, Indonesia. *Althea Medical Journal*, *10*(2), 104–109. https://doi.org/10.15850/amj.v10n2.2981

Russell, E. J., Fawcett, J. M., & Mazmanian, D. (2013). Risk of obsessive-compulsive disorder in pregnant and postpartum women: a meta-analysis. *The Journal of Clinical Psychiatry*, *74*(4), 377–385. https://doi.org/10.4088/JCP.12r07917

Setyawan, A. B. (2017). Hubungan Antara Tingkat Stres Dan Kecemasan Dengan Kejadian Hipertensi Pada Lansia Di Klinik Islamic Center Samarinda: Relationship Between Stress Level and Anxiety with Hypertension Incidence to Elderly on Islamic Center Clinic Samarinda. *Jurnal Ilmu Kesehatan*, *5*(1), 67–75.

Singh, J. N., Nguyen, T., Kerndt, C. C., & Amit, S. D. (2023). *Physiology, Blood Pressure Age Related Changes*. StatPearls Publishing.

Suciana, F., Nur Wulan Agustina, & Mifta Zakiatul. (2020). Korelasi Lama Menderita Hipertensi Dengan Tingkat Kecemasan Penderita Hipertensi. *Cendekia Utama: Jurnal Keperawatan dan Kesehatan Masyarakat STIKES Cendekia Utama Kudus*, *9*(2), 146–155. htpp://jurnal.stikescendekiautamakudus.ac.id

Unger, T., Borghi, C., Charchar, F., Khan, N. A., Poulter, N. R., Prabhakaran, D., Ramirez, A., Schlaich, M., Stergiou, G. S., Tomaszewski, M., Wainford, R. D., Williams, B., & Schutte, A. E. (2020). *Clinical Practice Guidelines 2020 International Society of Hypertension Global Hypertension Practice Guidelines International Society of Hypertension*, *75*(6), 1334–1357. https://doi.org/10.1161/HYPERTENSIONAHA.120.15026

Wang, X., Gao, D., Wang, X., Zhang, X., & Song, B. (2023). Hypertension, socioeconomic status and depressive and anxiety disorders: a cross-sectional study of middle-aged and older Chinese women. *BMJ Open*, *13*(12), e077598. https://doi.org/10.1136/bmjopen-2023-077598

Weo, Y. N. F., Dikson, M., & Ringgi, M. S. (2022). Hubungan Lama Menderita Hipertensi Dengan Tingkat Kecemasan Pada Lansia Di Wilayah Kerja Puskesmas Kopeta Kecamatan Alok Kabupaten Sikka. *Jurnal Keperawatan dan Kesehatan Masyarakat*, *9*(1), 7-14.

WHO. (2023). Global report on hypertension. In *World Health Organization*.

WHO. (2024). *Hypertension*. WHO. https://www.who.int/news-room/fact-sheets/detail/hypertension