



**STRESS AND QUALITY OF LIFE IN HYPERTENSION SUFFERERS: A  
SYSTEMATIC REVIEW**

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**ABSTRACT**

Hypertension has the potential to cause serious complications such as heart disease, stroke, and kidney failure if not treated properly. Apart from physical factors, hypertension sufferers also often face psychological problems such as stress, which can worsen their condition and affect their quality of life. This study aimed to explore the relationship between stress and quality of life in hypertension sufferers. This systematic review searched for relevant articles using MeSH-based keywords in databases such as Scopus, PubMed, Sage Journal, and Web of Science. The article inclusion criteria were: population: patients with hypertension, intervention: no intervention, comparison: no comparison, results: the article's results showed a relationship between stress and quality of life in people with hypertension. Article quality assessment was carried out using the Joanna Briggs Institute guidelines. Descriptive analysis was carried out using a narrative approach by considering articles published from 2012 to 2024. Based on a literature search, 36229 articles were found with appropriate keywords from Scopus (2578), PubMed (683), Sage Journal (31999), and Web of Science (969). After screening for inclusion and exclusion criteria, 11 articles were identified for inclusion in this review. These eleven articles show that there is a relationship between stress and quality of life in people with hypertension. The importance of a comprehensive approach that considers socioeconomic, demographic, and psychological factors to improve the quality of life of hypertension sufferers.

Keywords: hypertension; quality of life; stress

**How to cite (in APA style)**

Manihuruk, S., Melaniani, S., Indriani, D., & Suraya, A. S. (2024). Stress Stress and Quality of Life in Hypertension Sufferers: A Systematic Review. *Indonesian Journal of Global Health Research*, 7(1), 37-48. <https://doi.org/10.37287/ijghr.v7i1.3996>.

**INTRODUCTION**

Hypertension or high blood pressure is a medical condition that is commonly found in modern society (Ansar et al., 2019). This condition often does not show significant symptoms in the early stages (Shamsi et al., 2017), but has the potential to cause serious complications such as heart disease, stroke and kidney failure if not treated properly (Nugrahani et al., 2018). According to the World Health Organization (2024), the global prevalence of hypertension reaches 22% of the world's population. In Indonesia, hypertension cases increased by 8.31%, from 25.8% in 2013 to 34.11% in 2018 (Moonti et al., 2023). Apart from physical factors, hypertension sufferers also often face psychological problems such as stress, which can worsen their condition (Zhang et al., 2020). Stress is the body's response to pressure or threats, whether physical or emotional (Lumban Gaol, 2016). Hypertension sufferers often experience stress due to concerns about their health (Halawa et al., 2023), the lifestyle changes required, and the long-term impact of this disease (Ojangba et al., 2023). Prolonged stress can cause an increase in blood pressure (Ayada et al., 2015), which in turn worsens hypertension and reduces the sufferer's quality of life (Snarska et al., 2020). Quality of life is a broad concept that includes various aspects of physical, mental, and social well-being (Cai et al., 2021; Jannah et al., 2023). In people with hypertension, quality of life can be impaired

by various factors, including physical symptoms, the need to continuously monitor blood pressure, and the anxiety and depression that often accompany this condition (Qiu et al., 2023). Low quality of life can harm an individual's ability to live daily life, work and interact socially (Nutakor et al., 2023). Understanding more deeply how stress affects their quality of life, it is hoped that effective strategies can be found to manage stress and improve the quality of life of hypertension sufferers. These efforts are very important to improve the overall well-being of sufferers and reduce the risk of serious complications associated with hypertension. This study aims to explore the relationship between stress and quality of life in hypertension sufferers.

## METHOD

This research is a systematic literature review conducted to answer research questions. This study examines empirical evidence to explore the relationship between stress and quality of life in people with hypertension. The research was carried out systematically using the PRISMA literature review approach without conducting a meta-analysis of quantitative data. Results that were identical or not identical to the research paper were discarded. In this systematic review, the inclusion criteria were determined using PICOS, namely, Population: patients with hypertension, Intervention: no intervention, Comparison: no comparison, Results: article results show a relationship between stress and quality of life in people with hypertension, Study Design: A Longitudinal Study, Cross-Sectional Study, Publication Year: 2020-2024, Language: English. The exclusion criteria for articles were not related to the relationship between stress and quality of life in people with hypertension

## RESULTS

The search results yielded 36229 articles, which were then filtered and adjusted based on full text assessment to produce 11 articles. The flow diagram in this research is as follows:

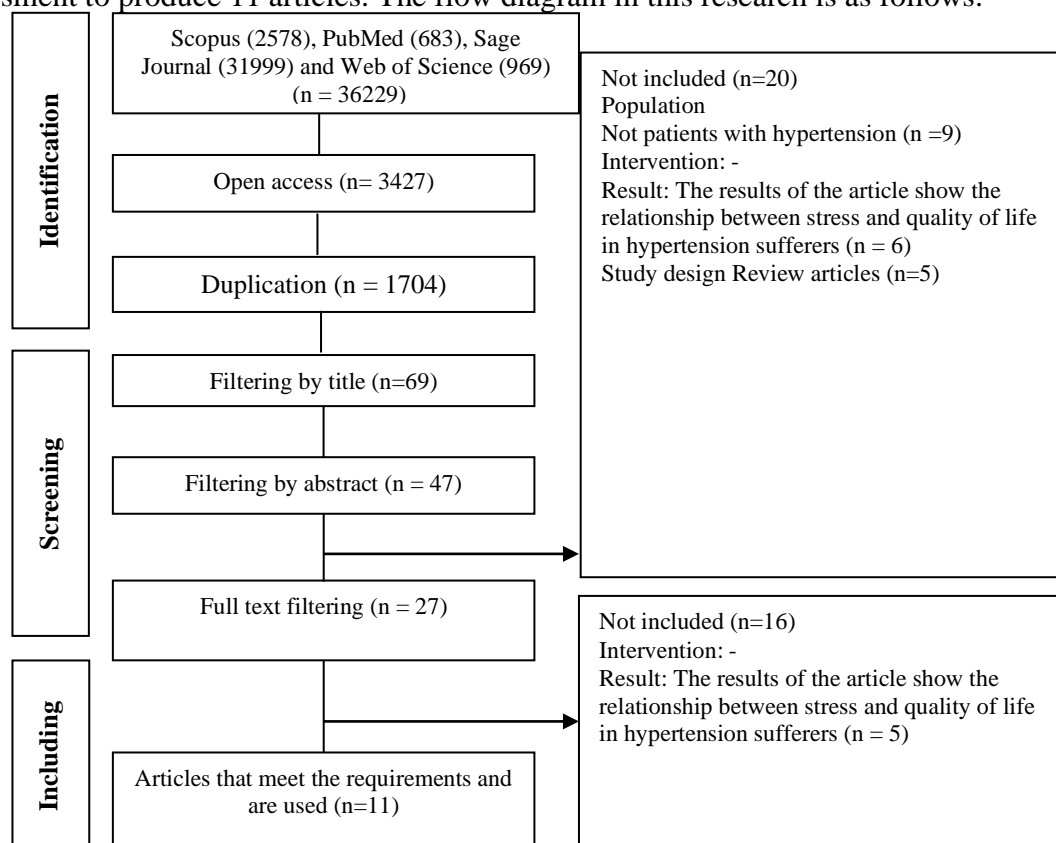


Figure 1. PRISMA flow diagram of the article selection process

Table 2.  
Stress and Quality of Life in Hypertension sufferers

No.	Title and Author	Country	Design	Sample	Result
1.	Predictors of Psychological Well-Being and Quality of Life in Patients with Hypertension: A Longitudinal Study (Crepaldi et al., 2024)	Italy	A Longitudinal Study	185	Longitudinal changes in physical and psychological well-being and quality of life were not significant after controlling for various covariates. Patients with high trait anxiety reported lower well-being initially, but this improved significantly up to 48 weeks, especially with type A (anxious) behavior (TABP). Patients with an internal locus of control and high self-esteem report better well-being over time.
2.	Socioeconomic position and quality of life among Colombian hypertensive patients: The mediating effect of perceived stress (Barradas et al., 2021)	Colombia	A Longitudinal Study	258	Socioeconomic position was measured using education and the MacArthur Scale. Stress is measured with the Perceived Stress Scale. Higher levels of education were associated with higher perceived stress (Coeff = 0.78, p = 0.019). Additionally, a lower position in society was associated with higher perceived stress (Coeff = -0.56, p = 0.027). Higher levels of perceived stress were associated with higher levels of mental health (Coeff = 0.64, p = 0.000). No statistical differences were found in the association between socioeconomic position and physical HRQoL.
3.	Epidemiological Determinants of Mental Well-Being and Quality of Life among Homemakers with Hypertension: A Cross-Sectional Analysis (Arulmohi et al., 2017)	India	Cross-Sectional Study	426	Of the study participants, 245 (57.5%) were aged $\leq 60$ years and 317 (74.4%) had been diagnosed with hypertension in the past decade. Low and high perceived stress were experienced by 306 (71.8%) and 120 (28.2%) women respectively. Among the four WHOQOL-BREF domains, the physical domain has the highest mean score ( $\pm$ standard deviation) of 67.44 ( $\pm 16.50$ ), while the lowest score of 54.49 ( $\pm 19.75$ ) is found in the social domain. The odds of high stress in single women and those taking $>2$ pills/day were 1.93 (P=0.004, 95% CI=1.228, 3.054) and 1.77 (P=0.038, 95% CI=0.962, 3.270) respectively. Quality of life was significantly better among those aged $<60$ years, married, and women who were not illiterate.
4.	A prospective longitudinal approach to examine the association between social position in childhood,	Colombia	A Longitudinal Study	258	The group with higher lifetime social standing and the group with lower lifetime social standing showed better hypertension control (OR = 1.21; p < .05; OR = 1.33; p < .05, respectively) compared with those whose social position varies throughout life. the

No.	Title and Author	Country	Design	Sample	Result
	adolescence, and adulthood with the control of hypertension during adulthood (Barradas et al., 2024)				most. No statistical differences were found in the association between lifetime social position variables, and hypertension control in the three time points analyzed
5.	Factors Affecting Quality of Life among Older Adults with Hypertension in Urban and Rural Areas in Thailand: A Cross-Sectional Study  (Chantakeeree et al., 2022)	Finland	A cross-sectional	420	Elderly people who live in urban areas have a higher quality of life score than elderly people in rural areas. Health-promoting behaviors significantly predict higher quality of life for the entire population. The perception of high health status will improve the quality of life of urban residents, while the presence of comorbidities will reduce the quality of life. Longer duration of hypertension predicted higher quality of life in rural residents.
6.	Effect of Mindfulness-Based Stress Reduction on Intraocular Pressure in Patients with Ocular Hypertension: A Randomized Control Trial (Dada et al., 2022)	India	A Randomized Control Trial	60	Significant reductions in intraocular pressure, blood cortisol levels, improved optic nerve head perfusion, and quality of life (QOL) are all associated with mindfulness-based stress reduction. Management of ocular hypertension may benefit from the use of mindfulness-based stress reduction.
7.	Facets Predicting Quality of Life in Patients with Blood Pressure Disorders (Shafiq et al., 2021)	Pakistan	Cross Sectional study	180	The results of this study indicate that perceived stress, hostility, and coping mechanisms are predictive of quality of life in patients with blood pressure problems
8.	Effect of a nurse-led hypertension management program on quality of life, medication adherence and hypertension management in older adults: A randomized controlled trial (Kolcu et al., 2020)	Türkiye	A randomized controlled trial	74	A training program consisting of 20 weeks of health education and motivation can help nurses working with older people is a nurse-led hypertension treatment program.
9.	Self-reported depression and its risk factors among hypertensive patients, Morocco: a cross-sectional study (Boukhari et al., 2024)	Morocco	a cross-sectional study	1053	Hypertension sufferers are more susceptible to mental health problems. The results of this study indicate that there is a reported incidence of depression. In light of these findings, it is recommended that people with hypertension receive mental health treatment in addition to their usual medical care.
10.	Higher Perceived Stress as an Independent Predictor for Lower Use of Emotion-	Portuguese	Cross sectional study	45	It has been observed that there is a negative correlation between positive emotion-focused coping responses and higher levels of perceived stress. However, perceived stress was

No.	Title and Author	Country	Design	Sample	Result
	Focused Coping Strategies in Hypertensive Individuals (Torres et al., 2022)				unrelated to executive functioning, problem focus and dysfunctional coping, or other aspects of quality of life.
11.	The association between antihypertensive medications and mental health outcomes among Syrian war refugees with stress and hypertension (Gammoh et al., 2023)	Syria	A cross sectional study	492	The relationship between antihypertensive drugs and Mental health symptoms were not seen in this study. Long future follow-up studies are required.

## DISCUSSION

### Perceived Stress and Quality of Life

A person's personality is influenced by various social, biological, psychological and behavioral factors. Personality type can influence a person's response to potentially stressful situations. There are various types of stress that individuals can experience, each with different characteristics and impacts, including Basic Stress a condition of tension or pressure experienced by a person in everyday life. Basic stress is caused by various sources of strain on the individual, emotional, family or social level. Acute Stress a sudden bodily reaction or threat to an individual, either physical or psychological. Cumulative Stress affects distressed sufferers so that a comprehensive approach is needed to control the sufferer's condition. Critical Incident Stress sufferers experience the occurrence of an incident of attack, family death, hostage taking, suicide, war (Saleh et al., 2020). As noted in the systematic review, higher perceived stress is associated with lower social status and higher educational attainment. Although perceived stress does not significantly affect physical quality of life. This is associated with higher levels of mental health (Barradas et al., 2021).

The finding that higher levels of education and lower social position are associated with higher perceived stress may be explained by Expectancy Theory and Social Stress Theory (Woods et al., 2023). Expectation Theory explains that individuals with higher education have greater expectations and demands on themselves, so they are more susceptible to stress when these expectations are not achieved (LIU & Fernando, 2024). Meanwhile, Social Stress Theory suggests that lower social positions often face more economic and social pressure, which increases stress levels. Higher perceived stress is associated with better mental health perhaps because awareness of stress encourages individuals to seek professional help. This does not have a significant effect on physical quality of life. Stress and Adaptation Theory explains that the human body has an adaptation mechanism to stress that can reduce the negative impact of stress on physical health. These findings highlight the importance of a holistic approach in dealing with stress, where attention is paid not only to mental states but also to social interventions that can help individuals in lower social positions manage their stress more effectively (V Ushakov et al., 2016).

### Socioeconomic Factors and Stress

Socioeconomic conditions are often a source of stress that can affect a person's mental and physical levels, as well as overall quality of life including education, income, employment

and social status. Socioeconomic disparities are a problem of health inequalities. Individuals from lower socioeconomic backgrounds tend to experience higher levels of stress due to financial instability, job insecurity and limited access to resources (Januraga & Ked, 2024). Individuals with higher socioeconomic positions show better hypertension control compared with those whose social positions vary throughout life. There were no significant differences in the association between socioeconomic position and hypertension control at the three-time points analyzed (Barradas et al., 2024). The finding that individuals with higher socioeconomic positions show better hypertension control compared with those whose social positions vary throughout life may be explained by Social Stress Theory (Lumban Gaol, 2016) and Social Gradient Theory of Health (Lai et al., 2021).

Social Stress Theory states that lower socioeconomic position is often associated with more chronic stress and more limited access to health resources, which may affect hypertension control (Lumban Gaol, 2016). Social Gradient Theory of Health shows that individuals with higher socioeconomic status tend to have better access to health services, better health education, and healthier lifestyles, all of which contribute to better hypertension control. Interestingly, the finding that there were no significant differences in the association between socioeconomic position and hypertension control at the three-time points analyzed suggests that the effects of socioeconomic status may be consistent over time, indicating that interventions to improve socioeconomic status may have a long-term impact on control. hypertension. In my view, these results emphasize the importance of public health policies that focus on improving access and quality of health services for all levels of society, especially for those who have lower socioeconomic status or who experience changes in socioeconomic status throughout their lives (Baumann et al., 2018; Lai et al., 2021).

### **Demographic Factors and Quality of Life**

Individual health behaviors influence the impact of the development of a disease. The habits and actions of individuals can increase medical costs as seen from the increase in mortality and disease rates in an area. This problem occurs because individuals do not have healthy living behaviors, which has a negative impact on public health conditions. According to Green Priyoto et al (2018) states that predisposing and enabling factors are knowledge attitudes, traditions, beliefs, value systems, education levels and socioeconomic status of the community. Better quality of life was found in younger individuals, married individuals, and women who were not illiterate. High stress was more likely in single women and those taking more than two pills per day. Higher quality of life was reported by urban elderly compared to rural elderly. Longer duration of hypertension predicts higher quality of life in rural residents (Arulmohi et al., 2017; Chantakeeree et al., 2022).

The finding that a better quality of life is found in younger individuals, married individuals, and non-illiterate women can be explained by Social Support Theory (Cao & Burton, 2022) and Human Capital Theory (Idris & Olaniyi, 2020; Palafox et al., 2017). Married individuals tend to have greater emotional and social support, which improves their well-being, while illiterate women have better access to information and health services, which contributes to a better quality of life. High stress in single women and those taking more than two pills per day can be explained by Double Burden Theory (Darmayanti, 2023), where single women may face additional stress from work and responsibilities without partner support, and use of more than two pills per day may indicate a more complex health condition, increasing stress. Urban elderly report a higher quality of life compared with rural elderly, which can be explained by Social Environmental Theory (Pakaya & Posumah, 2021), where access to better facilities and services in urban areas improves their quality of life. Interestingly, longer

duration of hypertension was associated with higher quality of life in rural residents, which may be explained by Health Adaptation Theory (Punamiasih, 2021), where individuals who have lived with hypertension longer may have developed effective coping strategies and better access to ongoing care. In my view, these results demonstrate the importance of increasing access to social support, health education, and health services in rural areas, as well as developing strategies for managing stress in single women and individuals with complex health conditions.

### **Psychological and Behavioral Influences**

Patients with high anxiety show improvements in well-being over time, especially with high self-esteem being associated with better well-being. Lower levels of stress were associated with greater use of emotion-focused coping strategies (Boukhari et al., 2024; Crepaldi et al., 2024; Dada et al., 2022; Torres et al., 2022). Locus of control formation is a self-adjustment and stabilization process related to exploration and manipulation of the environment, both internal and external. According to Rotter 1996 in Busro (2017) the concept of Locus of Control is divided into two, namely: first Internal locus of control: Individuals with characteristics believe that they have direct control over their behavior and performance at work. they tend to take full responsibility for their actions and work results. Second External locus of control: individuals in this category tend to consider or the actions of others, more instrumental in determining their work behavior and task success. The finding that patients with high anxiety show improvements in well-being over time, especially with behavior, is explained through Stress Adaptation Theory (Punamiasih, 2021).

This theory states that individuals with high-trait anxiety may be better trained in dealing with stress and developing effective coping strategies. Behavior characterized by high ambition and regularity can help individuals manage their anxiety more productively. Theory Locus of Control (Sumijah, 2015) explains that individuals with an internal locus of control believe that they can control their destiny, which increases well-being. High self-esteem also contributes to better well-being, according to Self-Esteem Theory (Arroisi & Badi', 2022) which states that a positive view of oneself improves mental well-being. The finding that lower levels of stress were associated with greater use of emotion-focused coping strategies may be explained by the Coping Theory proposed by Lazarus and Folkman, where coping focused on emotions helps individuals manage emotional responses to stress, thereby reducing its impact. In my view, these results highlight the importance of developing effective coping strategies and building self-esteem as well as locus of control internally to improve the well-being of individuals, especially those with high anxiety tendencies (Maryam, 2017).

Pharmaceutical factors had little effect on the mental health of hypertensive patients in this systematic study. In the research of Gammoh et al. The results show that the relationship between antihypertensive drugs and mental health symptoms is not apparent (Gammoh et al., 2023). This can be caused by hypertension that is too high so that the effect of antihypertensive drugs is not visible on mental health. Therefore, it is necessary to study further the dose and level of hypertension in patients as well as the duration of research studies (Berlowitz et al., 2017; Gammoh et al., 2023; Kretchy et al., 2014).

### **CONCLUSION**

This research shows that stress has a significant impact on quality of life and the management of hypertension. Findings from various countries indicate that socioeconomic, demographic, and psychological factors play an important role in determining the level of stress and quality of life of people with hypertension. Individuals with higher socioeconomic positions tend to

have better hypertension control, while better quality of life is found in younger individuals, married individuals, and non-illiterate women. Higher stress was found in single women and those taking more than two pills per day. Patients with high anxiety show improvements in well-being over time, primarily through the use of emotion-focused coping strategies. The general conclusion from these findings is the importance of a comprehensive approach that considers socioeconomic, demographic, and psychological factors to improve the quality of life of people with hypertension. However, limitations in study design, geographic variation, and differences in measurement methods emphasize the need for further research to strengthen and clarify these findings.

## REFERENCE

- Ansar, J., Dwinata, I., & M, A. (2019). Determinan Kejadian Hipertensi Pada Pengunjung Posbindu DiWilayah Kerja Puskesmas Ballaparang Kota Makassar. *Jurnal Nasional Ilmu Kesehatan*, 1(3), 28–35.
- Arroisi, J., & Badi', S. (2022). Konsep Harga Diri: Studi Komparasi Perspektif Psikologi Modern dan Islam. *Psikologika: Jurnal Pemikiran Dan Penelitian Psikologi*, 27(1), 89–106. <https://doi.org/10.20885/psikologika.vol27.iss1.art7>
- Arulmohi, M., Vinayagamoorthy, V., & R., D. A. (2017). Physical Violence Against Doctors: A Content Analysis from Online Indian Newspapers. *Indian Journal of Community Medicine*, 42(1), 147–150. <https://doi.org/10.4103/ijcm.IJCM>
- Ayada, C., Toru, & Korkut, Y. (2015). The relationship of stress and blood pressure effectors. *Hippokratia*, 19(2), 99–108.
- Barradas, S., Lucumi, D., Agudelo, D. M., & Mentz, G. (2021). Socioeconomic position and quality of life among Colombian hypertensive patients: The mediating effect of perceived stress. *Health Psychology Open*, 8(1). <https://doi.org/10.1177/2055102921996934>
- Barradas, S., Lucumi, D. I., Mentz, G., & Agudelo, D. M. (2024). A prospective longitudinal approach to examine the association between social position in childhood, adolescence, and adulthood with the control of hypertension during adulthood. *Frontiers in Public Health*, 12(April), 1–11. <https://doi.org/10.3389/fpubh.2024.1296593>
- Baumann, M., Bucki, B., Tchicaya, A., & Le Bihan, E. (2018). Reversing social gradient: Impact of patients' communication with their practitioners on adherence to preventive behaviours. " *Health Psychology across the Lifespan: Uniting Research, Practice and Policy*".
- Berlowitz, D. R., Foy, C. G., Kazis, L. E., Bolin, L. P., Conroy, M. B., Fitzpatrick, P., Gure, T. R., Kimmel, P. L., Kirchner, K., & Morisky, D. E. (2017). Effect of intensive blood-pressure treatment on patient-reported outcomes. *New England Journal of Medicine*, 377(8), 733–744.
- Boukhari, F. Z., Belayachi, S., Essayagh, F., Terkiba, O., Naji, A. A., Amine, M., Lambaki, A., Essayagh, M., Essayagh, S., & Essayagh, T. (2024). Self-reported depression and its risk factors among hypertensive patients, Morocco: a cross-sectional study. *Scientific Reports*, 14(1), 1–9. <https://doi.org/10.1038/s41598-024-61390-y>



- Busro, M. (2017). *Manajemen Sumber Daya Manusia*. Expert.
- Cai, T., Verze, P., & Bjerklund Johansen, T. E. (2021). The Quality of Life Definition: Where Are We Going? *Uro*, 1(1), 14–22. <https://doi.org/10.3390/uro1010003>
- Cao, L., & Burton, V. S. (2022). Social Support Theory. *A Criminologist's Life*, 31–46. <https://doi.org/10.4324/9780429059735-5>
- Chantakeeree, C., Sormunen, M., Estola, M., Jullamate, P., & Turunen, H. (2022). Factors Affecting Quality of Life among Older Adults with Hypertension in Urban and Rural Areas in Thailand: A Cross-Sectional Study. *International Journal of Aging and Human Development*, 95(2), 222–244. <https://doi.org/10.1177/00914150211050880>
- Crepaldi, M., Gianni, J., Brugnera, A., Greco, A., Compare, A., Rusconi, M. L., Poletti, B., Omboni, S., Tasca, G. A., & Parati, G. (2024). Predictors of Psychological Well-Being and Quality of Life in Patients with Hypertension: A Longitudinal Study. *Healthcare (Switzerland)*, 12(6), 1–14. <https://doi.org/10.3390/healthcare12060621>
- Dada, T., Mondal, S., Midha, N., Mahalingam, K., Sihota, R., Gupta, S., Angmo, D., & Yadav, R. K. (2022). Effect of Mindfulness-Based Stress Reduction on Intraocular Pressure in Patients With Ocular Hypertension: A Randomized Control Trial. *American Journal of Ophthalmology*, 239, 66–73. <https://doi.org/10.1016/j.ajo.2022.01.017>
- Darmayanti, D. P. (2023). Beban Ganda dan Perubahan Peran Gender: Dampak pada Hubungan Keluarga dan Keseimbangan Kehidupan. *ALLIRI: Journal of Anthropology*, 5(2).
- Gammoh, O., Bjørk, M. H., Al Rob, O. A., AlQudah, A. R., Hani, A. B., & Al-Smadi, A. (2023). The association between antihypertensive medications and mental health outcomes among Syrian war refugees with stress and hypertension. *Journal of Psychosomatic Research*, 168(November 2022). <https://doi.org/10.1016/j.jpsychores.2023.111200>
- Halawa, A., Artini, B., & Manutmasa, Y. S. (2023). Hubungan Tingkat Stres Dengan Kejadian Hipertensi Pada Usia Dewasa Awal (18-40 Tahun). *Jurnal Keperawatan*, 12(2), 34–45. <https://doi.org/10.47560/kep.v12i2.541>
- Idris, A., & Olaniyi, O. (2020). ANALYSIS OF ECONOMIC BURDEN OF HYPERTENSION IN NIGERIA. *Nigerian Journal of Economic and Social Studies*, 62(2).
- Jannah, F., Safutra Suraya, A., Erindia, F., Nurwahidah, N., & Chayatush Sholichah, A. (2023). The Benefits of Telehealth on Quality of Life of People Living with Type 2 Diabetes Mellitus: A Literature Review. *Fundamental and Management Nursing Journal*, 6(2), 69–77. <https://doi.org/10.20473/fmnj.v6i2.48692>
- Januraga, P. P., & Ked, S. (2024). *Modal Sosial dalam Meningkatkan Kesehatan Masyarakat: Pendekatan Teoritis dan Empiris*. Baswara Press.
- Kretchy, I. A., Owusu-Daaku, F. T., & Danquah, S. A. (2014). Mental health in hypertension: assessing symptoms of anxiety, depression and stress on anti-hypertensive medication adherence. *International Journal of Mental Health Systems*, 8, 1–6.

- Lai, E. T. C., Yu, R., & Woo, J. (2021). Social gradient of self-rated health in older people-the moderating/mediating role of sense of community. *Age and Ageing*, 50(4), 1283–1289. <https://doi.org/10.1093/ageing/afaa277>
- LIU, X., & Fernando, Y. (2024). Review Theories of Subjective Well-being and the Impact of Stress: The Mediating Effect of Resilience. *International Journal of Innovation Research in Education, Technology and Management*, 1(1), 33–42. <https://doi.org/10.61098/ijiretm.v1i1.112>
- Lumban Gaol, N. T. (2016). Teori Stres: Stimulus, Respons, dan Transaksional. *Buletin Psikologi*, 24(1), 1. <https://doi.org/10.22146/bpsi.11224>
- Maryam, S. (2017). Strategi Coping: Teori Dan Sumberdayanya. *JURKAM: Jurnal Konseling Andi Matappa*, 1(2), 101. <https://doi.org/10.31100/jurkam.v1i2.12>
- Moonti, M. A., Sutandi, A., & Fitriani, N. D. (2023). Hubungan Life Style Dengan Kejadian Hipertensi Pada Dewasa Di Desa Jagara Kecamatan Darma Kabupaten Kuningan Tahun 2023. *National Nursing Conference*, 1(2), 55–68. <https://doi.org/10.34305/nnc.v1i2.860>
- Nugrahani, A. D., Azis, M. M. A., & Agustin, D. F. (2018). Penerapan Teknologi Mutakhir Intranasal Low Intensity Laser Therapy (ILILT) 650 nm untuk Mereduksi Viskositas Darah dan Mencegah Aktivasi NAD(P)H Oxidase (Nox) Sebagai Tatalaksana Efektif Ameliorasi Homeostasis pada Penderita Hipertensi. *Jimki*, 6(2), 125–137.
- Nutakor, J. A., Zhou, L., Larnyo, E., Addai-Danso, S., & Tripura, D. (2023). Socioeconomic Status and Quality of Life: An Assessment of the Mediating Effect of Social Capital. *Healthcare (Switzerland)*, 11(5). <https://doi.org/10.3390/healthcare11050749>
- Ojangba, T., Boamah, S., Miao, Y., Guo, X., Fen, Y., Agboyibor, C., Yuan, J., & Dong, W. (2023). Comprehensive effects of lifestyle reform, adherence, and related factors on hypertension control: A review. *Journal of Clinical Hypertension*, 25(6), 509–520. <https://doi.org/10.1111/jch.14653>
- Pakaya, I., & Posumah, J. H. (2021). Pengaruh Lingkungan Sosial Terhadap Pendidikan Masyarakat Di Desa Biontong I Kecamatan Bolangitang Timur Kabupaten Bolaang Mongondow Utara. *Jurnal Administrasi Publik*, VII(104), 11–18. <https://ejournal.unsrat.ac.id/v3/index.php/JAP/article/view/33692>
- Palafox, B., Goryakin, Y., Stuckler, D., Suhrcke, M., Balabanova, D., Alhabib, K. F., Avezum, A., Bahonar, A., Bai, X., & Chifamba, J. (2017). Does greater individual social capital improve the management of hypertension? Cross-national analysis of 61 229 individuals in 21 countries. *BMJ Global Health*, 2(4), e000443.
- Priyoto, D. A., Hartono, A., & Pitayanti, A. (2018). Perilaku Kesehatan dan Pendidikan Kesehatan. Pustaka Panesaa.
- Punamiasih. (2021). Teori Dan Model Adaptasi Sister Calista Roy : Pendekatan Keperawatan. *Jurnal Ilmiah Kesehatan*, 2(November 2014), 18. [https://www.researchgate.net/profile/Jek-Amidos/publication/347208243\\_Teori\\_Dan\\_Model\\_Adaptasi\\_Sister\\_Calista\\_Roy\\_Pendekatan\\_Keperawatan/links/5fdce78a45851553a0cde803/Teori-Dan-Model-Adaptasi-Sister-Calista-Roy-Pendekatan-Keperawatan.pdf](https://www.researchgate.net/profile/Jek-Amidos/publication/347208243_Teori_Dan_Model_Adaptasi_Sister_Calista_Roy_Pendekatan_Keperawatan/links/5fdce78a45851553a0cde803/Teori-Dan-Model-Adaptasi-Sister-Calista-Roy-Pendekatan-Keperawatan.pdf)

- 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. <https://doi.org/10.1155/2023/9619388>
- Saleh, L. M., Russeng, S. S., & Tadjuddin, I. (2020). *Manajemen stres kerja (sebuah kajian keselamatan dan kesehatan kerja dari aspek psikologis pada ATC)*. Deepublish.
- Shamsi, A., Nayeri, N. D., & Esmaeili, M. (2017). Living with hypertension : A qualitative original article. *International Journal of Community Based Nursing Midwifery*, 5(3), 219–230.
- Snarska, K., Chorąży, M., Szczepański, M., Wojewódzka-żeleznikowicz, M., & Ładny, J. R. (2020). Quality of life of patients with arterial hypertension. *Medicina (Lithuania)*, 56(9), 1–11. <https://doi.org/10.3390/medicina56090459>
- Sumijah. (2015). Locus of control pada masa dewasa. *Seminar Psikologi Dan Kemanusiaan*, 384–391.
- Torres, L. A., Paradela, R. S., Martino, L. M., da Costa, D. I., & Irigoyen, M. C. (2022). Higher Perceived Stress as an Independent Predictor for Lower Use of Emotion-Focused Coping Strategies in Hypertensive Individuals. *Frontiers in Psychology*, 13(May), 1–7. <https://doi.org/10.3389/fpsyg.2022.872852>
- V Ushakov, A., S Ivanchenko, V., & A Gagarina, A. (2016). Psychological stress in pathogenesis of essential hypertension. *Current Hypertension Reviews*, 12(3), 203–214.
- Woods, S. B., Hiefner, A. R., Udezi, V., Slaughter, G., Moore, R., & Arnold, E. M. (2023). ‘They should walk with you’: the perspectives of African Americans living with hypertension and their family members on disease self-management. *Ethnicity & Health*, 28(3), 373–398. <https://doi.org/10.1080/13557858.2022.2040958>
- Zhang, H., Jiang, X., Da, H., Dai, R., Zhao, N., Pan, W., & Fan, J. (2020). Effect of comprehensive psychosomatic promotion in hypertension patients with anxiety and depression based on community: A randomized parallel controlled trial. *Medicine (United States)*, 99(33), E21451. <https://doi.org/10.1097/MD.00000000000021451>.

