

Hypertension Patients' Knowledge, Attitudes, and Control Measures in Bukittinggi: A Qualitative Study

Pengetahuan, Sikap dan Upaya Pengendalian Hipertensi pada Penderita Hipertensi di Kota Bukittinggi: Studi Kualitatif

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Abstract

Hypertension remains a major global health concern, causing numerous deaths worldwide. Approximately 1.13 billion people suffer from hypertension, with an estimated 10.44 million deaths annually due to hypertension and its complications. This study aims to explore the knowledge, attitudes, and actions taken by hypertensive patients in Bukittinggi City. The research was conducted in the Mandiangin Health Center Working Area, involving 17 hypertension patients, one officer responsible for the Non-Communicable Diseases (NCD) program, and the head of the community health center. This qualitative study used a phenomenological approach, identifying three main themes: knowledge, attitude, and action. The sub-themes include "awareness of hypertension diagnosis," "emotional response to diagnosis," "hypertension management efforts," and "support from health workers." Findings indicate that most patients were unaware of their hypertension diagnosis until they experienced symptoms or were screened during routine checkups. The dominant hypertension management strategies involved seeking treatment at the community health center and maintaining dietary modifications. This study highlights the experiences of hypertensive patients in improving knowledge, attitudes, and behavioral strategies for better hypertension control.

Keywords: Hypertension, Elderly, Behavior, Experience

Abstrak

Hipertensi masih menjadi masalah kesehatan global yang utama, yang menyebabkan banyak kematian di seluruh dunia. Sekitar 1,13 miliar orang menderita hipertensi, dengan perkiraan 10,44 juta kematian setiap tahunnya akibat hipertensi dan komplikasinya. Penelitian ini bertujuan untuk mengeksplorasi pengetahuan, sikap, dan tindakan yang dilakukan oleh pasien hipertensi di Kota Bukittinggi. Penelitian dilakukan di Wilayah Kerja Puskesmas Mandiangin, dengan melibatkan 17 pasien hipertensi, satu orang petugas yang bertanggung jawab atas program Penyakit Tidak Menular (PTM), dan kepala puskesmas. Penelitian kualitatif ini menggunakan pendekatan fenomenologi, dengan mengidentifikasi tiga tema utama: pengetahuan, sikap, dan tindakan. Subtema tersebut meliputi "kesadaran akan diagnosis hipertensi," "respons emosional terhadap diagnosis," "upaya manajemen hipertensi," dan "dukungan dari petugas kesehatan." Temuan menunjukkan bahwa sebagian besar pasien tidak menyadari diagnosis hipertensi mereka sampai mereka mengalami gejala atau diskriminasi selama pemeriksaan rutin. Strategi manajemen hipertensi yang dominan melibatkan mencari pengobatan di puskesmas dan mempertahankan modifikasi pola makan. Penelitian ini menyoroti pengalaman pasien hipertensi dalam meningkatkan pengetahuan, sikap, dan strategi perilaku untuk pengendalian hipertensi yang lebih baik.

Kata kunci: Hipertensi, Lansia, Perilaku, Pengalaman

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Article Received : March 11, 2025

Article Revised : March 26, 2025

Article Published : March 31, 2025

INTRODUCTION

Hypertension is a condition that does not cause clear symptoms, so people who experience it may not be aware of its existence(1). Due to limited public awareness, inadequate preventive measures contribute to the growing prevalence of hypertension-related complications (WHO, 2018). Hypertension is defined as blood pressure exceeding 140/90 mmHg. Epidemiological data indicate that hypertension prevalence increases significantly with age, reaching 50% among individuals aged 60 years and older (2,3).

According to WHO, hypertension ranks first among the preventable causes of death worldwide. The prevalence of hypertension tends to increase with increasing age, where hypertension increases sharply at ages > 50 years (4). Epidemiological data shows that the prevalence of hypertension is 20 – 25% at the age of 30 years (5) and continues to increase significantly with age, reaching 50% at the age of 60 years and over. Around 7.1 million deaths per year are estimated to be caused by hypertension is attributed to obesity and associated with a high-sodium diet (6).

In Indonesia, the prevalence of hypertension has risen from 25.8% in 2013 to 34.1% in 2018 (7). Data from the West Sumatra Provincial Health Service (2020) revealed that early detection of PTM risk factors among individuals aged ≥ 15 years only covered 1.34% of the target population, highlighting a significant gap in hypertension awareness and control efforts.

West Sumatra Provincial Health Service profile data through the 2020 Mental Health P2PTM section report shows that the number of people aged ≥ 15 years who underwent early detection of PTM risk factors was 48,815 people from the coverage target of 3,629,267 people, meaning only 1.34% was achieved and is still far from the target set in the Ministry of Health's strategic plan. The results of this early detection found 30,340 cases of hypertension (62.15% of the total population aged ≥ 15 years who underwent early detection). Data from the Bukittinggi City Health Service in 2020, the number of hypertension sufferers in Bukittinggi City was 6,702 people, with (22.5%) of the total population of Bukittinggi being 130,773 people (7).

There are many physiological changes due to the aging process that the elderly will experience, one of which is the loss of heart capacity, which has the potential to cause hypertension (8). Increasing age causes health to decline gradually. Total cholesterol levels will most likely increase according to our current health condition. Age, gender, obesity, coffee, alcohol, smoking, education, genetics, salt consumption, stress, and irregular blood pressure monitoring are some of the factors that can contribute to the development of hypertension (9–11). The main cause of hypertension is generally thought to be poor quality of life, which is exacerbated by the lack of accessible places for elderly patients with hypertension to monitor their blood pressure.

There are two important factors related to health in treating hypertension, the first is personal factors which are the main factors that influence health and the second factor is the environment (12). Personal factors include biological and psychological factors, while environmental factors include factors related to the local environment, time (atmosphere), technology, and social norms (13).

Bukittinggi, a city characterized by a high prevalence of hypertension and specific dietary habits influenced by Minangkabau culture, presents a unique context to explore patient experiences in hypertension control making by policymakers in formulating appropriate intervention programs through an independent approach to knowledge, attitudes, and behavior of controlling hypertension.

METHOD

This research used a qualitative descriptive design, data collection using in-depth interviews, and observation using the phenomenological method. This research describes the general meaning of a number of individuals regarding the hypertension they experience to obtain information or an overview of understanding (knowledge, attitudes, and experiences) from the participant's perspective (14). This research was conducted to identify the practices

of hypertensive patients in taking measures to control high blood pressure. This research was carried out using in-depth interviews and observations of 17 elderly informants suffering from hypertension and 2 key informants, namely 1 person holding the Non-Communicable Diseases (PTM) program and 1 head of the Mandiangin Koto Selayan Community Health Center, Bukittinggi City. Researchers will make conclusions, which will be described in the form of information expressed in words and language. The stages carried out in this descriptive phenomenology process are intuiting, analyzing, and describing.

Sample recruitment was through purposive sampling, where the researcher selected participants who were in accordance with the objectives of the research. Patients were purposively recruited from the registered hypertensive patient list provided by Mandiangin Health Center. The criteria for participants in this study were patients who had been diagnosed with hypertension for more than 5 years in order to gain experience of hypertensive patients in controlling hypertension. Participants are also able to communicate well, are able to provide informed consent independently, and are not represented by other people to participate in this research. Data was collected for 2 months, from 20 August to 20 October 2023, using in-depth interviews. Researchers used in-depth interviews because this data collection method is suitable and used to explore data about the knowledge, attitudes and experiences of hypertensive patients in carrying out measures to control hypertension. Before the in-depth interview was conducted, the researcher explained the research procedures and the time required during the interview. After participants received an explanation, participants were asked to sign an informed consent form. This in-depth interview was divided into 2 groups: the first group was hypertension patients, and the second group was key informants, namely non-communicable disease program holders and heads of community health centers. The first group of participants who took part in this research were coded P1 – P20, and the second group of participants were key informants with codes Ki1 and Ki2. The interview guide includes questions related to the experiences of hypertensive patients in implementing hypertension control efforts. Interviews lasted 20 to 35 minutes and were recorded with prior permission. Researchers provided collection tools and interview guides.

In order to achieve the effectiveness and efficiency of this research, the number of participant informants was adjusted to suit saturation during in-depth interviews, namely around 20 people. Qualitative data processing begins with transcribing data from voice recordings (transferring voice data into written form). Next, carry out data cleaning by checking the transcript results and note data with the aim of seeing the suitability (accuracy) between the transcript and the voice recording. Data were analyzed using thematic analysis, which aims to obtain the knowledge, attitudes and experience of hypertensive patients in carrying out hypertension control measures. The researcher transcribed the interview word for word into the text, then read it several times to obtain meaning and identify themes, and finally, the themes were arranged into a meaningful whole (15). Researchers carry out trustworthiness by convincing informants that the research results are correct and trustworthy. Strategies that can be carried out to increase the validity of data in qualitative research include credibility tests (internal validity), transferability (external validity), dependability (reliability), and confirmability (objectivity) (16,17). To increase the credibility of the findings of this study (18), we confirmed the final themes with the participants. Confirmability is carried out by

sending interview findings in the form of the results obtained and then asking for responses to obtain approval from participant representatives. They are asked to verify the accuracy of the results. Transferability is achieved by distilling research findings and then providing a narrative explanation of the interview results.

This research has received ethical approval from the ethics commission from Prima Nusantara University, Bukittinggi, with the number 141/KEPK/UPNB/VIII/2023. All informants in this research have received detailed information about research procedures and have been provided with informed consent, which can be signed if the informant agrees to participate in this research. The identities of informants in this research are kept confidential and protected using initials or unique codes. All audio recordings and interview transcripts were securely stored on an encrypted computer, and physical documents were kept in a locked cabinet accessible only to the researchers the research instruments that have been filled in are directly input into the computer by the researcher. There is no conflict of interest in this research.

RESULT

Socio-demographic Characteristic Profile

The informants in this research were people suffering from hypertension and the key informant was the person in charge of the Non-Communicable Diseases (PTM) control program and the Head of the Mandiangin Koto Selayan Community Health Center, Bukittinggi City. The number of hypertension informants involved in this research was 20 people, 1 person holding the PTM program and 1 head of the Community Health Center.

Tabel 1. Characteristics of In-depth Interview Informants

Codes	Age	Blood Pressure	Gender	Job's Status	History of Diseases
P1	60	170/100	Male	Self-Employed	Heart Disease
P2	71	146/90	Male	Retired	Cholesterol
P3	62	123/90	Female	Housewife	Diabetes mellitus
P4	78	155/80	Female	Retired	Ginjal
P5	59	160/90	Female	Housewife	Diabetes mellitus
P6	59	214/100	Male	Labor	Diabetes mellitus
P7	71	141/80	Female	Housewife	Gout
P8	65	125/100	Female	Housewife	None
P9	65	159/100	Female	Retired	Heart Disease
P10	73	178/100	Female	Retired	None
P11	51	139/100	Female	Civil servants	Heart Disease
P12	66	145/100	Male	Teacher	None
P13	67	154/100	Female	Retired	None
P14	69	165/90	Male	Retired	Gout
P15	68	150/100	Male	Berdagang	Asthma
P16	51	147/86	Female	Teacher	Cholesterol
P17	78	132/95	Male	Retired	Diabetes mellitus
P18	55	136/98	Female	Civil servants	Gastric acid
P19	57	161/102	Male	Seller	None
P20	53	122/95	Male	Self-Employed	Gastric acid

This group of informants was all hypertensive patients who were divided into 2 groups, namely controlled and uncontrolled hypertension. Patients with controlled hypertension have systolic blood pressure < 140 mmHg and systolic < 90 mmHg, while uncontrolled hypertension

has systolic blood pressure ≥ 140 mmHg and diastolic ≥ 90 mmHg. The socioeconomic status was categorized based on reported occupation and monthly income levels, classified into low, middle, and high-income groups. The most common jobs are housewives in the female gender, civil servants such as teachers and school principals who have held positions for more than 2 years, then retirees and casual jobs such as building work and informal trader. All informants were hypertensive, and 4 informants had controlled hypertension and 13 informants had uncontrolled hypertension. Almost all informants had a history of cardiovascular disease such as heart disease, diabetes, obesity, high cholesterol and gastritis.

Theme dan Subthemes:

Theme 1: Knowledge about hypertension:

Understanding is the result of someone knowing an object through the associated senses. Knowledge includes the concept of hypertension when experiencing hypertension for the first time, prevention, and control of hypertension. Based on in-depth interviews, it was found that the majority of hypertensive patients did not know when they first had hypertension because the informants felt fine, there were no symptoms of illness, and were still able to carry out activities as usual, but after being checked, their blood pressure was already high (hypertension).

"I don't know exactly when I got hypertension, my body was as normal and I could carry out activities as usual, what I felt was a heavy head, and when I checked my blood pressure at the pharmacy, it turned out my blood pressure was 200/90 mmHg. (P -2)"

"At first I didn't know, then there was a practical student, the first BP measurement was immediately 214 mmHg, then the next day I went to the community health center and the next day's BP was measured at 185, from then on I was told to take regular medication until now, currently the BP is 150 mmHg" (P -6)

"I only found out about Covid 19 in 2020, before that I didn't know, because I didn't have any illnesses" (P -7).

I only found out that I had high blood pressure in the last 3 months, I found out when my younger brother was a practical student and came to my house to record and check my blood pressure, and when I checked my mother's blood pressure it was immediately 197/100 mmHg, and then after a week of taking blood pressure lowering medication it became 147 and now the mother's blood pressure has risen again, namely 178, but with the mother's blood pressure going up and down, nothing feels sick. (P -10)

"I only found out in 2017 when I had a health check to go on the Hajj and found out that my father had high blood pressure." (P -15)

Most of the informants did not know the time when they first had hypertension, and when their blood pressure was high, the informants did not feel any specific symptoms and the informants could still carry out activities as usual, so the informants felt in a healthy condition. Only a small number of informants felt symptoms such as dizziness and heavy headaches during hypertension. Most informants found out they had hypertension when they felt dizzy and their shoulders felt heavy, and after being examined it turned out they had high blood

pressure or hypertension and most informants had experienced other cardiovascular diseases as a result of hypertension. The results of this study are also in accordance with the results of research where the results of the research showed that the seriousness of the problem of hypertension can be seen from the characteristics of the disease, both in terms of causes and its impact on other health problems. The cause of hypertension is not known with certainty (7).

According to the theory, it also produces results that are similar to the results of research where hypertension is called "The Silent Killer" because it often occurs without complaints so that sufferers do not know they have hypertension and it is discovered after complications occur that cause death.(1). Hypertension is a risk factor for cardiovascular and other catastrophic diseases such as heart disease, stroke, kidney failure and diabetes. Body organs such as the brain, eyes, heart, kidneys and peripheral arteries will be damaged by hypertension. Organ damage due to hypertension is related to the magnitude of the increase in blood pressure and how the condition is not diagnosed early and treated (19).

These results are also in line with those conveyed by the PTM program holder where the results of the event are as follows:

"In general, patients do not know when they have hypertension, patients find out when they go for treatment and it turns out they already have high blood pressure and are already at risk of diseases caused by hypertension such as diabetes, heart disease and gout" (Ki-1)

"Many patients do not know that they have hypertension, because the patient feels fine and can still do their work as usual, even with high blood pressure." (Ki-1), (Ki-2).

From the results of the interview above, it can be concluded that, generally hypertensive patients do not know exactly when they first got hypertension. Most hypertensive patients find out they have hypertension when they come for treatment because they experience dizziness and heavy shoulders and after checking their blood pressure it turns out that their blood pressure is already high. Generally, patients seek treatment not because of hypertension but because of other diseases or other cardiovascular diseases due to the risks of hypertension.

Theme 2: Causes of Hypertension

There are many factors that cause hypertension, such as age, diet, compliance with taking medication and stress.(20). Knowledge has long been recognized as a vital factor that contributes to and enhances self-care behavior in chronic disease management. Warren-Findlow and colleagues (2011) noted that knowledge had a positive impact on self-care behaviors in families.(21). In general, informants have good knowledge about the causes of hypertension and have taken preventive measures. The causes most frequently experienced by informants varied from thoughts, and stress, to food habits and lack of physical activity. Based on the results of the interviews, themes about the causes of hypertension can be obtained from the experiences of informants who experience hypertension. The themes are as follows:

Tabel 2. Theme and Subtheme

Tema	Sub tema	Sampel Code
Knowledge about hypertension	Knowledge of signs and symptoms of hypertension	"When I have high blood pressure, what I feel is that my head feels a little floating and my body feels like it's shaking a bit."
		"My body doesn't really feel like I have high blood pressure, which is that my head is a bit heavy and my body feels shaky, but I can still sell"
Coused of hypertension	Mind and stress.	"Usually, if you think a lot about your mother's blood pressure, your blood pressure will immediately become high. If your blood pressure is already high, your body will usually become less comfortable, so sleeping will also become less comfortable."
		"What you feel when your blood pressure rises is because you're thinking a lot, besides that, you might also be tired."
	Eating Habbit	"The cause for me is because of my eating habits of liking foods containing coconut milk and oily foods" "At lunch my father likes foods containing coconut milk such as gajeboh and fish curry"
		"Mum likes to eat meatballs and eats them with soup like soup, but if your blood pressure is up, you don't eat them anymore. When you were young, you ate meatballs almost every day."
Attitudes and feelings when experiencing hypertension	Lack of physical activity	"I really don't move enough because of gout, my feet hurt when I walk long distances."
		"There are no other physical activities, because currently the mother is still taking care of her grandchildren, and activities for housework such as washing, sweeping the house only"
	Negative Attitude:	"Yes, I feel worried, because I have heart disease, because the side effects of hypertension can cause stroke."
Positive attitude		"I'm also a little anxious, because there are people in my family who also experience high tension." "As for high blood pressure, I don't feel worried, because I don't have any symptoms, so I'm not worried" "I don't feel worried, because this is a provision from Allah, behind all this there is definitely wisdom from Allah and we too will go to Allah"
Experience in preventing and controlling hypertension	Health worker support	"I got a lot of information and counseling about hypertension when I was seeking treatment,"
		"We get counseling when we go for treatment to the health center"

Theme 3 Attitudes and feelings of informants when experiencing hypertension

The basis for forming attitudes is when personal experience leaves a strong impression. Attitudes will be easily formed if personal experiences occur in situations that involve emotional factors. Attitude is an expression of a person's emotional feelings, either positive or negative. In this research, attitude can be described as the subject's tendency to respond like or dislike an object. The informants in this study were sufferers of controlled and uncontrolled hypertension, had positive attitudes such as accepting well and feeling sincere, and negative attitudes such as being anxious and feeling burdened by hypertension. Based on in-depth

interviews conducted with informants, the attitudes of the informants can also be grouped into 2, namely positive attitudes towards the hypertension they suffer from, and those with negative attitudes, such as anxiety and worry about hypertension.

Theme 4 Experience in efforts to prevent and control hypertension

The prevention and control experience in this study is a form of routine activity carried out by informants in carrying out daily life which has become a habit of hypertensive patients which is related to various efforts to be able to carry out a healthy lifestyle for hypertensive patients and maintain normal blood pressure

"I take hypertension medication regularly, now my father has been prescribed by a doctor to take Isosorbite Dinitrate medication, this medication is a must to drink regularly" (P – 1), (P – 5), reduce eating eggs" (P – 9).

"What you can do to prevent hypertension is to take a morning walk 3 times a week and watch your diet by reducing salt" (P 2)

"The most important thing for mothers is to calm their minds, mothers are also active in doing yoga, listening to music, praying and doing light exercise. (P – 11)

"Apart from taking medicine, father also often makes chayote fruit and vegetable juice, drinks herbal and natural things like boiled bay leaves" (P – 14), (P – 16).

"After dawn, I usually just take a leisurely walk every day, walking approximately 1 km/day. Before the age of 45, I used to walk up to 4 km/day in the morning. (P – 17).

DISCUSSION

The experience of controlling hypertension carried out by informants is making efforts to treat and control hypertension, starting from taking regular medication and maintaining your diet by reducing salty foods and foods containing coconut milk. There were 2 informants who calmed their minds with dhikr, prayers and light exercise such as yoga so they don't get stressed because unsettled thoughts or stress can trigger high blood pressure or hypertension. To be active in physical activity, most of the informants had difficulty doing physical activities such as walking or exercising, because they were old and had gout. so he couldn't walk long distances because his feet hurt if he walked long distances, and from the observation results it was also seen that the informant was overweight, which made it more difficult for the elderly to carry out physical activities.

Get support from health workers by providing education about controlling and treating hypertension when they come for treatment at the Community Health Center. If they cannot come for treatment at the Community Health Center, the informant looks for information via the internet when the patient feels symptoms of hypertension such as dizziness and stiff shoulders. The experience of hypertension is also influenced by elderly families, where the support provided by Minagkabau cultural families in all aspects of hypertension treatment, whether physical, social, psychological or spiritual, is still largely negative, such as the low level of emotional and informational family support for the elderly, which has an impact on

hypertension treatment. In the elderly, where informants who do not receive good support from their families will affect the control of hypertension by the elderly, especially if the informant experiences limitations in carrying out activities, so that the informant cannot carry out activities in carrying out measures to control hypertension.

Based on the results of in-depth interviews conducted with the head of the Community Health Center and the holders of the Non-Communicable Diseases (PTM) program, efforts have been made to provide posyandu for the elderly and posbindu for PTM which are still inadequate by holding the "**Yuk Lihat Ke Mesjid**" activity where this activity carries out health checks. in mosques in the working area of the Mandiangin Koto Selayan Community Health Center, Bukittinggi City.

At the elderly posyandu there are examinations aimed at maintaining the physical health of the elderly, where activities carried out include measuring blood pressure, checking blood sugar and simple medication. Informants who are active in participating in the elderly posyandu receive regular health checks and are monitored via KMS every month so that the health of the elderly can be controlled by health service officers. In addition to health checks at the elderly posyandu, health education regarding hypertension is also provided so that elderly posyandu participants become more aware of how to control pressure. Blood by changing lifestyle and diet, apart from that, the elderly posyandu also provides free antihypertensive medication.

Elderly people who are not actively using the elderly posyandu will not be able to monitor their health condition properly. Elderly people who have health complaints tend to close themselves off and limit social interaction, thereby causing a decline in their health condition, because the blood pressure and health conditions of the elderly in the working area of the Mandiangin Koto Selayan Community Health Center, Bukittinggi City, are not monitored (22).

Limitation of this study is the reliance on self-reported data from interviews, which may introduce recall bias or social desirability bias, potentially influencing the accuracy of participants' responses. Additionally, the cross-sectional nature of the qualitative data limits the ability to establish causal relationships or observe changes over time. Future studies could incorporate longitudinal methods or triangulation with quantitative data to enhance the robustness and generalizability of the findings

CONCLUSION

The informant's knowledge is still low regarding when he or she is affected by hypertension because the informant's symptoms do not feel pain and can still carry out activities as usual. The attitude of informants when experiencing hypertension is that most patients have a positive attitude, where the informant does not feel anxious or worried, because the informant does not feel sick and can still work as usual and also the informant feels sincere about hypertension and surrenders it to Allah, but there are also informants who feel worried, because most of the informants had a history of diseases such as heart disease, diabetes, gout and high cholesterol, so the informants felt worried about the bad effects of hypertension. The informant's experience in efforts to prevent and control hypertension by the informant is quite good, where the informant has made efforts to live a healthy life to prevent hypertension, such

as regularly taking medication, maintaining a diet and reducing salty and fatty foods, the informant has also taken herbal ingredients which have been proven to reduce blood pressure.

ACKNOWLEDGEMENT

The Ministry of Higher Education, Science, and Technology of Republic Indonesia through the Indonesian Education Scholarship and Endowment Fund for Education Agency), Ministry of Finance of Republic Indonesia. Awardee Number 202101121110 and researchers express their gratitude to the Health Center where the study was conducted and the participants in this study.

REFERENCES:

1. WHO. Global Brief on Hypertension: Silent Killer, Global Public Health Crisis. *Indian J Phys Med Rehabil.* 2013;24(1):2–2.
2. Puspita E, Oktaviarini E, Dyah Puspita Santik Y. Peran Keluarga Dan Petugas Kesehatan Dalam Kepatuhan Pengobatan penderita Hipertensi Di Puskesmas Gunungpati Kota Semarang. *J Kesehatatan Masy Indones.* 2017;12(2):25–32.
3. Thomopoulos C, Parati G, Zanchetti A. Effects of blood pressure lowering on outcome incidence in hypertension.1. Overview, meta-analyses, and meta-regression analyses of randomized trials. *J Hypertens.* 2014;32(12):2285–95.
4. Değer VB. The Prevalence of Hypertension among Individuals Aged Between 20-65 Years and Affecting Factors. *Ann Rev Res.* 2020;5(5).
5. Arici M, Birdane A, Güler K, Yildiz BO, Altun B, Ertürk S, et al. Turkish hypertension consensus report. *Turk Kardiyol Dern Ars.* 2015;43(4):402–9.
6. Tan ST, Quek RYC, Haldane V, Koh JJK, Han EKL, Ong SE, et al. The social determinants of chronic disease management: Perspectives of elderly patients with hypertension from low socio-economic background in Singapore. *Int J Equity Health.* 2019;18(1):1–14.
7. Meilisa M, Djuwita R, Satria EB. Analisis Situasi Masalah Penyakit Tidak Menular Di Kota Bukittinggi. *Hum Care J.* 2023;8(1):1.
8. Du X, Fang L, Xu J, Chen X, Bai Y, Wu J, et al. The association of knowledge, attitudes and behaviors related to salt with 24-h urinary sodium, potassium excretion and hypertensive status. *Sci Rep [Internet].* 2022;12(1):1–12. Available from: <https://doi.org/10.1038/s41598-022-18087-x>
9. Indriani S, Fitri AD, Septiani D, Mardiana D, Didan R, Amalia R, et al. Pengetahuan, Sikap, dan Perilaku Lansia dengan Riwayat Hipertensi Mengenai Faktor yang Mempengaruhi Hipertensi. *J Pengabdian Kesehatan Masy Pengmaskesmas.* 2021;1(2):39–50.
10. Tan ST, Quek RYC, Haldane V, Koh JJK, Han EKL, Ong SE, et al. The social determinants of chronic disease management: Perspectives of elderly patients with hypertension from low socio-economic background in Singapore. *Int J Equity Health.* 2019;18(1).
11. Mai AS, Lim OZH, Ho YJ, Kong G, Lim GEH, Ng CH, et al. Prevalence, Risk Factors and Intervention for Depression and Anxiety in Pulmonary Hypertension: A Systematic Review and Meta-analysis. *Front Med.* 2022;9(February):1–13.
12. Christine Fernande NB, Pierre MM, Veronique NE, Laure NJ. Dietary Habits of Adults Hypertensive Patients Admitted in Cardiology of Deido District Hospital, Cameroon. *Adv Food Technol Nutr Sci - Open J.* 2019;5(1):1–7.
13. Notoatmodjo. Promosi Kesehatan & Ilmu Perilaku. In: Rineka Cipta. Rineka Cipta;

- 2007.
14. Creswell JW. *Penelitian Kualitatif & Desain Riset*. 3rd ed. Qudsy SZ, editor. Yogyakarta: Pustaka Pelajar; 2015.
 15. Creswell WJ. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* [Internet]. Vol. 53, *Journal of Chemical Information and Modeling*. 2018. 1–388 p. Available from: [file:///C:/Users/Harrison/Downloads/John W. Creswell & J. David Creswell - Research Design_ Qualitative, Quantitative, and Mixed Methods Approaches \(2018\).pdf](file:///C:/Users/Harrison/Downloads/John%20W.%20Creswell%20-%20Research%20Design%20Qualitative,%20Quantitative,%20and%20Mixed%20Methods%20Approaches%20(2018).pdf)[file:///C:/Users/Harrison/AppData/Local/Mendeley Ltd./Mendeley Desktop/Downloaded/Creswell, Cr](file:///C:/Users/Harrison/AppData/Local/Mendeley%20Ltd./Mendeley%20Desktop/Downloaded/Creswell,%20Cr)
 16. Sugiyono. *Metode Penelitian Kualitatif*. 3rd ed. Suryandari SY, editor. Bandung: Alfabeta; 2020.
 17. Utarini A. *Penelitian Kualitatif Dalam Pelayanan Kesehatan*. 3rd ed. Galih, editor. Yogyakarta: Gadjah Mada University; 2021.
 18. Stefinee Pinnegar MLH. *Self-Study on Practice as a Genre of Qualitative Research*. 8th ed. John Loughran, Monash University, Clayton AA, editor. Clayton, Australia: Springer Dordrecht Heidelberg, London New York; 2009. 253 p.
 19. Rahajeng E, Tuminah S. Prevalensi Hipertensi dan Determinannya di Indonesia. *Maj Kedokt Indones*. 2009;59:580–7.
 20. Sulistyarini I. Terapi Relaksasi untuk Menurunkan Tekanan Darah dan Meningkatkan Kualitas Hidup Penderita Hipertensi. *J Psikol* [Internet]. 2013;40(1):28–38. Available from: [http://download.garuda.kemdikbud.go.id/article.php?article=352965&val=5021&title=Terapi Relaksasi untuk Menurunkan Tekanan Darah dan Meningkatkan Kualitas Hidup Penderita Hipertensi](http://download.garuda.kemdikbud.go.id/article.php?article=352965&val=5021&title=Terapi%20Relaksasi%20untuk%20Menurunkan%20Tekanan%20Darah%20dan%20Meningkatkan%20Kualitas%20Hidup%20Penderita%20Hipertensi)
 21. Warren-Findlow J, Seymour RB, Shenk D. Intergenerational transmission of chronic illness self-care: Results from the caring for hypertension in African American families study. *Gerontologist*. 2011;51(1):64–75.
 22. Putri AM, Fitriangga A, Fahdi FK. Perbedaan Kualitas Hidup Lansia Dengan Hipertensi Yang Aktif Dan Yang Tidak Aktif Mengikuti Posyandu Lansia Di Wilayah Kerja Puskesmas Perumnas Ii Pontianak (the Difference in Quality of Life in Elderly With Hypertension Who Were Active and Ina. *Bimiki*. 2019;7(2):11–9.