

Characteristics of Hypertension Patients in the Working Area of the Parlilitan District Health Center, Humbang Hasundutan Regency, North Sumatra Province, 2023

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ABSTRACT

Hypertension is an increase in blood flow that occurs in the human body and is a leading cause of death globally. Hypertension does not only affect the elderly but also individuals of productive age. It is also referred to as the "silent killer." This study aims to describe the characteristics of hypertension patients in the working area of the Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, in 2023. This study used a descriptive method. The sampling technique employed was total sampling, with a total of 86 respondents. The measurement tool used was an Observation Sheet. The results showed that respondents aged 55–65 years numbered 30 (34.9%), while those aged 26–35 years numbered 4 (4.7%). Based on gender, 46 respondents were male (53.5%) and 40 were female (46.5%). Based on education, 33 respondents (38.4%) had completed senior high school/vocational school, and 14 respondents (16.3%) had attended higher education. Based on occupation, 43 respondents (50.0%) were farmers, 12 (14.0%) were housewives, and 31 (36.2%) were civil servants. Regarding marital status, 84 respondents (97.7%) were married, while 2 respondents (2.3%) were unmarried. Regarding medication, 67 respondents (66.3%) did not consume hypertension medication, while 34 respondents (33.7%) did. Based on symptoms frequently experienced by respondents, 71 respondents (82.6%) reported dizziness, and 15 respondents (17.4%) reported pain. Based on the study results, most hypertension patients had blood pressure classified as hypertension grade II, totaling 40 respondents (50.5%), while the minority were in the prehypertension category, totaling 8 respondents (7.9%).

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INTRODUCTION

Hypertension is an increase in blood flow that occurs in the human body and is a leading cause of death globally. A person is diagnosed with hypertension when their systolic blood pressure (SBP) is ≥ 140 mmHg and diastolic blood pressure (DBP) is ≥ 90 mmHg after repeated measurements, accounting for 10.4 million deaths annually. Hypertension is known as persistently high blood pressure, characterized by blood pressure exceeding normal limits, which are 120 mmHg for systolic and 80 mmHg for diastolic (WHO, 2018).

The World Health Organization (WHO) estimates that the current global prevalence of hypertension is 22% of the total population (Ri, 2020). Of these patients, less than one-fifth make efforts to control their blood pressure.

In general, JNC 8 (The Eighth Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure) classifies blood pressure in adults (≥ 18 years) into four groups: normal, prehypertension, hypertension grade I, and hypertension grade II (Sedayu, 2017). Many factors can increase the risk or tendency for an individual to develop hypertension, including personal characteristics such as age, sex, and ethnicity, as well as genetic and environmental factors, including obesity, stress, salt consumption, smoking, alcohol consumption, and others. These factors usually do not act independently but interact collectively, as explained by the mosaic theory of essential hypertension. This theory states that hypertension results

from several interacting causes, with the main factors in pathophysiology being genetic factors and at least three environmental causes: salt intake, stress, and obesity (Yonata, 2018).

Hypertension, or high blood pressure, is a chronic disease that requires monitoring and treatment. The risk of increased blood pressure can lead to hypertension, which may be influenced by factors such as age, sex, body mass index, smoking, and lifestyle. One modifiable factor is lifestyle; the modern lifestyle practiced by the majority of people worldwide is fast-paced and often involves consuming fast food, which is known to be high in sodium (Riskesdas, 2018).

The highest prevalence of hypertension, at 27%, is found in Africa, while Southeast Asia ranks third with a prevalence of 25% of the total population (WHO, 2019; Gabriella et al., 2021). In Indonesia, the prevalence of hypertension among the elderly, according to the 2018 Riskesdas survey, was quite high at 45.9%, with 25.8% in the 18–64 age group, 57.6% in the 65–74 age group, and 63.8% in those aged 75 and above. Only 36.8% of cases were diagnosed by health personnel, meaning that the majority of hypertension cases (63.2%) remain undiagnosed (Riskesdas, 2018). According to Riskesdas 2019, the prevalence of hypertension measured in adults aged ≥ 18 years was 34.1%, highest in South Kalimantan (44.1%) and lowest in Papua (22.2%). Hypertension occurs in age groups 31–44 years (31.6%), 45–54 years (45.3%), and 55–64 years (55.2%). The prevalence of hypertension in North Sumatra is quite high at 24.7% (Simamora & Rista, 2021).

In 2018, these rates increased significantly to 13.2% for ages 18–24 years, 20.1% for ages 25–34 years, and 31.6% for ages 26–44 years. The exact cause of hypertension is still unknown. Additionally, there is a shift in the population of hypertension patients toward younger age groups in Indonesia, with causes not yet fully understood. Considering these factors, the researcher aims to investigate the prevalence and characteristics of hypertension in young adults (18–45 years) in Indonesia, in order to implement preventive measures.

WHO predicts that by 2025, hypertension cases will increase by approximately 80%, rising from 639 million cases in 2020 to 1.5 billion cases in 2025, mainly in developing countries including Indonesia. Hypertension is the third leading cause of death in Indonesia for all ages (68%), after stroke (15.4%) and tuberculosis (7.5%). This shows that most hypertension patients in the community (around 63.2%) remain undiagnosed by healthcare personnel (Hazwan, 2017).

According to Purwanto (2020) and Fitriani (2015), characteristics are aspects of personality that describe an individual's inner structure as reflected in behavior, influencing compliance with medical treatment. The characteristics to be studied include age, sex, marital status, occupation, main complaints, hypertension grade, comorbidities, and medications used (Dr. Dody Sarjoto, Makassar).

Based on a survey conducted by the author, there were 86 hypertension patients in the working area of the UPT Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province. The majority of respondents with hypertension were female (56.0%) and male (44.0%). Among age groups, respondents aged ≥ 50 years were more numerous (78.0%) than those aged ≤ 50 years (22.0%). The oldest respondent was 70 years old, and the youngest was 40 years old. The older the age, the higher the incidence of hypertension.

Regarding education, respondents with higher education (junior high, senior high, university) were fewer (22.0%) compared to respondents with lower education (78.0%) up to elementary school. Differences in education level, directly or indirectly, influence perspective, thinking patterns, and acceptance of information regarding hypertension treatment.

Regarding occupation, most respondents were farmers (42.0%) and a similar number were unemployed (42.0%). Respondents working as traders accounted for 34.0%, and 2.0% were civil servants. Regarding income, most respondents had low income (72.0%) compared to high income (28.0%).

Regarding complications, 56.0% of respondents had hypertension without complications, which usually occurs because hypertension often shows no symptoms until complications develop. Among complications, heart failure was most common (36.1%), followed by chronic kidney failure (22.2%) and stroke (1.0%). Most respondents who smoked frequently numbered 46 (63%), while none reported rare smoking (0%).

Preventive measures and treatment for hypertension are necessary to avoid complications. Lifestyle modifications for hypertension patients, including a healthy diet (limiting fatty and sugary foods), increased physical activity, stress reduction, and avoiding smoking and alcohol, are important factors in controlling blood pressure (Biokley & Lynn S., 2017; Fikriana, 2016). Healthy lifestyle modifications can minimize complications such as heart attack, stroke, chronic kidney failure, or heart failure. Based on the background described, the purpose of this study is to examine the characteristics of hypertension patients in the working area of the UPT Health Center, Parlilitan District, Humbang Hasundutan, Medan, in 2023.

METHODS

This study aims to examine the characteristics of hypertension patients in 2023. The design of this thesis describes the Characteristics of Hypertension Patients in the Working Area of the Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, in 2023. The sample used in this thesis employed total sampling, meaning all hypertension patients in the working area of the Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, in 2023, totaling 86 individuals.

In this thesis, dependent and independent variables are used, where the independent variables are manipulated, observed, and measured to determine their relationship or effect on other variables. The dependent variable in this thesis is hypertension, while the independent variables are the characteristics of hypertension patients. The instrument used for this study is an observation sheet.

Data collection is the process of obtaining subjects and gathering information for a study. The data collected in this research are secondary data, obtained from medical records and directly collected by the researcher from respondents as well as from existing records.

Data analysis was conducted descriptively by examining percentages and presenting them in frequency tables. The researcher used Microsoft Excel 2010 and SPSS for analysis. After all data were collected, the first step was to check the data recorded on the observation sheets. Once the data were complete, the researcher entered the data into Microsoft Excel 2010 according to the codes provided in the observation sheet. Then, the data were imported into SPSS and categorized. In SPSS, the researcher clicked Analyze > Descriptive Statistics > Frequencies, selected Charts under Statistics, checked Pie Chart, then clicked Continue, and finally clicked OK. This process generated the results along with diagrams.

RESEARCH RESULTS AND DISCUSSION

In this chapter, the research results regarding the characteristics of hypertension patients in the working area of the Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, will be described. The total number of respondents in this study was **86 individuals**. The study was conducted from **April 19 to early May 2023** in the working area of the Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province.

Frequency Distribution of Demographic Characteristics Data

The respondents in this study were 86 people with hypertension in the Parlilitan Community Health Center (UPT) Work Area, Humbahas Regency, North Sumatra Province, in 2023. The

researchers grouped the respondents' demographic data based on age, gender, education, occupation, marital status, blood pressure, name of medication, and frequently experienced symptoms.

Table 1 Frequency Distribution of Respondents' Demographic Characteristics Data Based on Age

	Age	Frequency (f)	Percent (%)
	Age 26- 35	4	9.3%
	Age 36- 45	8	18.6%
	Age 56- 65	30	34.9%
	Age 66- 75	28	32.6%

Based on Table 1 based on research, respondents based on age include the majority aged 56 - 75 as many as 30 people (34.9%) and based on age include the minority aged 26 - 35 as many as 4 people (9.3 %).

Table 2. Frequency Distribution of Respondents' Demographic Characteristics Data Based on Gender

Type sex	Frequency (f)	Percent (%)
Man	46	53.5
Woman	40	46.5
Total	86	100.0

Based on Table 2, the majority gender is male, 46 people (53.5%) and the minority gender is female, 40 people (46.5%).

Table 3 Frequency Distribution of Respondents' Demographic Characteristics Data Based on Education

Education	Frequency (F)	Percent (%)
Elementary School	23	26.7
JUNIOR HIGH SCHOOL	16	18.6
High School/Vocational School	33	38.4
College Tall	14	16.3
Total	86	100.0

Based on Table 3, the majority of high school graduates were 33 people (38.4%) and the minority had tertiary education of 14 people (16.3%).

Table 4. Frequency Distribution of Demographic Characteristics Data Based on Occupation

Work	Frequency (F)	Percent (%)
Farmer	43	50.0
housewife	12	14.0
Self-employed	6	7.0
ASN	31	36.2
Total	86	100.0

Based on Table 4, the majority of jobs include farmers, amounting to 43 people (50.0%), and the data includes a minority of self-employed, amounting to 6 people (7.0%).

Table 5. Frequency of Demographic Characteristics Data Based on Marital Status

Marital status	Frequency (F)	Percent (%)
Already Marry	84	97.7
Not yet Marry	2	2.3
Total	86	100.0

Based on Table 5 the marital status includes the majority being married, as many as 84 people (97.7%) and the demographic data includes the minority being unmarried, as many as 2 people (2.3%).

Table 6. Frequency of Demographic Characteristics Data Based on Drug/Medication

Name Drugs/Medications	Frequency (f)	Percent (%)
No Consuming Drug	58	67.4
Hypertension		
Consuming hypertension medication	28	32.6
Total	86	100.0

Based on Table 6, the names of drugs/ medication include the majority of those who do not consume hypertension medication, namely 58 people (67.4%), and the demographic data for the minority who consume hypertension medication is 28 people (32.6%).

Table 7. Frequency of Demographic Characteristics Data Based on Frequently Experienced Symptoms

Symptom Which often experienced	Frequency (F)	Percent (%)
Dizzy	71	82.6
Painful	15	17.4
Total	86	100.0

Based on Table 7, the symptoms frequently experienced include the majority of dizziness symptoms, as many as 71 people (82.6%), and demographic data includes a minority of pain symptoms, as many as 15 people (17.4%).

Table 8. Frequency Distribution of Data on the Characteristics of Hypertension Patients in the Working Area of the Parlilitan Community Health Center, Humbahas Regency, North Sumatra Province, 2023 (n=86)

Pressure blood systolic Valid	Frequency (F)	Percent (%)
Pre Hypertension 120/80- 139/89	8	7.9%
Hypertension degrees I 140/90- 159/99	36	41.9%
Hypertension degrees II \geq 160/100	40	50.5%
Total	86	100.0

Based on Table 8, the results of the demographic data on blood pressure show that the majority of people with grade II hypertension are 40 people (50.5%), and the demographic data on blood pressure show that the minority are prehypertension is 8 people (7.9%).

Discussion

Characteristics Data of Hypertension Patients in the Working Area of Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023

Based on the results of the study, among hypertension patients, the majority had grade II hypertension, totaling 40 individuals (50.5%), while the minority were in the prehypertension category, totaling 8 individuals (7.9%). This condition is caused by an unhealthy lifestyle and a lack of experience and knowledge about the dangers of hypertension.

Long-term and persistent hypertension can trigger stroke, heart attack, heart failure, and is a major cause of chronic kidney failure (Lingse, 2020). Preventive measures for hypertension include maintaining a healthy lifestyle.

Demographic Characteristics of Respondents Based on Age in the Working Area of Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023

Based on the research results for the age factor, most respondents were aged 55–65 years, totaling 30 individuals (34.9%), while the minority were aged 26–35 years, totaling 4 individuals (4.7%). Generally, hypertension is more highly prevalent in individuals over 40 years old, and its incidence is even higher in those over 60 years old.

This finding aligns with the study by Anisa and Bahri (2017), which found that the majority of respondents were in the middle adulthood age range (40–65 years), totaling 97 respondents (64.7%). Similarly, a study by M. Isra et al. (2017) conducted at Ranomuut Health Center in Manado found that respondents aged >65 years numbered 26 (34.7%), followed by ages 56–65 years with 12 respondents (16%), 45–55 years with 20 respondents (26.7%), and 36–45 years with 13 respondents (17.3%).

Sensitivity to hypertension increases with age. Individuals over 60 years old tend to have higher blood pressure, typically $\geq 140/90$ mmHg. These hypertension patients often undergo regular check-ups, receive treatment, and gain information from various health education programs related to hypertension, including its treatment, lifestyle management, and potential complications.

Demographic Characteristics of Respondents Based on Gender in the Working Area of Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023

Based on gender, the results of this study show that the majority of respondents were male, totaling 46 individuals (53.5%), compared to 40 females (46.5%). This is because men often have more factors that contribute to hypertension, such as heavy workloads that cause fatigue. Consequently, men experience higher levels of work-related stress than women, and stress is one of the triggers for hypertension.

This finding aligns with Anisa (2018), which showed that the majority of respondents were male (81 individuals, 54.0%) and the minority female (69 individuals, 46.0%), and with Ikhwan (2015), which reported that most respondents were male (45 individuals, 57.7%) and the minority female (33 individuals, 42.3%), indicating that men are more susceptible to hypertension. However, this study contrasts with Tumenggung (2017), which found that the majority of hypertension cases were women, totaling 16 individuals (53.3%).

Demographic Characteristics of Respondents Based on Marital Status in the Working Area of Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023

Based on marital status, the results of this study show that the majority of respondents were married, totaling 84 individuals (97.7%), while the minority were unmarried, totaling 2 individuals (2.3%).

Demographic Characteristics of Respondents Based on Education in the Working Area of Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023

Based on education level, the results of this study show that the majority of respondents had senior high school/vocational school (SMA/SMK) education, totaling 33 individuals (38.4%), while the minority had higher education (Bachelor's degree, S1), totaling 14 individuals (16.3%). The researcher suggests that education level can influence a person's ability and knowledge to practice healthy habits, particularly in preventing hypertension and its complications. The higher a person's education level, the greater their knowledge to maintain a healthy lifestyle and avoid disease.

This study indicates that patients with adequate knowledge of hypertension tend to develop proper attitudes and behaviors. In this context, adherence to a hypertension diet is considered good or compliant.

The results also show that hypertension patients with good knowledge are more likely to follow their diet plan properly. Conversely, non-compliance may not only be influenced by a person's ability to manage a hypertension diet and the knowledge or information obtained, but also by boredom in maintaining adherence to keep blood pressure stable.

These findings align with Asyrof (2017), which reported that the majority of respondents had elementary school education (SD), totaling 26 individuals (54.2%), and the minority had senior high school education (SMA), totaling 9 individuals (18.8%). Similarly, Anisa and Bahri reported that most respondents had elementary school education (SD), totaling 61 individuals (40.7%), while the minority were unschooled, totaling 6 individuals (4.0%). Patients with good knowledge have a higher likelihood of proper diet management compared to those with less knowledge.

Demographic Characteristics of Respondents Based on Occupation in the Working Area of Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023

Based on occupation, the results of this study show that the majority of respondents were farmers, totaling 43 individuals (50.0%), followed by housewives (IRT) with 12 individuals (14.0%) and civil servants (ASN) with 31 individuals (36.2%). Occupation, as previously explained, can influence a person's stress level, which in turn can affect blood pressure, especially in hypertension patients.

Work is an inseparable part of an individual's life, and it can cause stress, which may trigger an increase in blood pressure. This study found that hypertension patients were more prevalent among those who were employed, and many were non-compliant with a proper hypertension diet. This is because their busy work schedules often led them to eat out or consume fast food (Anisa & Bahri, 2017).

Demographic Characteristics of Respondents Based on Medication in the Working Area of Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023

Based on the study results, among respondents regarding medication consumption, 58 individuals (32.6%) did not take antihypertensive drugs, while 28 individuals (47.4%) did. This is due to non-compliance in taking antihypertensive medication and a lack of information from healthcare services about the importance of consuming these drugs to maintain stable blood pressure. Some respondents, however, reported that they adhered to their antihypertensive medication and frequently received information from healthcare facilities.

This finding aligns with Istiana et al. (2018), which showed that the majority of hypertension patients who regularly sought treatment totaled 21 individuals (16.7%), those who occasionally sought treatment numbered 26 individuals (20.6%), and those who never sought treatment totaled 19 individuals (15.1%). Most patients with long-term hypertension do not regularly visit healthcare facilities because they feel bored with the treatment, whereas patients who are more compliant have better knowledge of the consequences of hypertension.

Some respondents also reported obtaining information from healthcare facilities, which was directly collected by the researcher. Most respondents chose to avoid or limit foods that trigger hypertension and continued to follow their prescribed treatment and diet to prevent further complications. This is consistent with the study by Delima Sari et al. (2018), which found that the majority of respondents had suffered from hypertension for 1-5 years, totaling 60 individuals (82.2%).

Demographic Characteristics of Respondents Based on Frequently Experienced Symptoms in the Working Area of Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023

Based on the study results, regarding frequently experienced symptoms, the majority of respondents experienced dizziness, totaling 71 individuals (82.6%), while pain was reported by 15 individuals (17.4%). The dizziness experienced by respondents may be caused by brain swelling due to high blood pressure or by vascular damage in the peripheral blood vessels, which disrupts normal blood flow.

This finding aligns with the study by Asriah Septiawati et al. (2021), which found that the most common symptom experienced by hypertension patients was reported by 53 respondents (4.3%), while the minority symptom was related to a history of gout, experienced by 5 respondents (4.3%).

CONCLUSION

Based on the results of this study with a sample of **86 respondents** regarding the characteristics of hypertension patients in the working area of the Upt Health Center, Parlilitan District, Humbahas Regency, North Sumatra Province, 2023, the following conclusions can be drawn: Age: Most respondents were aged 55–65 years, totaling 30 individuals (34.9%), while the minority were aged 26–35 years, totaling 4 individuals (4.7%). Gender: The majority of respondents were male, totaling 46 individuals (53.5%), and female respondents totaled 40 individuals (46.5%). Education: The majority of respondents had senior high school/vocational school (SMA/SMK) education, totaling 33 individuals (38.4%), while the minority had higher education (Bachelor's degree, S1), totaling 14 individuals (16.3%). Occupation: Most respondents were farmers, totaling 43 individuals (50.0%), followed by housewives (IRT) with 12 individuals (14.0%), and civil servants (ASN) with 31 individuals (36.2%). Marital Status: Most respondents were married, totaling 84 individuals (97.7%), while unmarried respondents totaled 2 individuals (2.3%). Medication: Among respondents, 67 individuals (66.3%) did not take antihypertensive medication, while 34 individuals (33.7%) did. Symptoms: The majority of respondents frequently experienced dizziness, totaling 71 individuals (82.6%), while pain was reported by 15 individuals (17.4%). Blood Pressure: Most respondents had grade II hypertension, totaling 40 individuals (50.5%), while the minority were in the prehypertension category, totaling 8 individuals (7.9%). Recommendation: Future researchers are suggested to continue this study by investigating factors that influence hypertension, such as consumption of fatty foods, high sodium intake, and non-compliance with antihypertensive medication, in order to achieve a more comprehensive understanding of the condition.

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