

A Descriptive Study of the Characteristics of Older Adults with Hypertension

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ABSTRACT

Background: Hypertension is a common chronic disease among older adults and increases the risk of stroke, heart disease, kidney dysfunction, disability, and premature mortality. Identifying patient characteristics is necessary for developing appropriate hypertension-management programmes at the primary healthcare level.

Research Objective: This study aimed to describe the characteristics of older adults with hypertension at the Poasia Primary Health Care Centre, Kendari.

Methods: This quantitative study employed a descriptive design involving 42 older adults with hypertension selected through purposive sampling. Data were collected using structured questionnaires, medical records, anthropometric assessments, and direct blood pressure measurements. The data were analysed using univariate analysis and presented as frequencies and percentages.

Results: Most respondents were aged 60-69 years (57.1%), female (61.9%), had primary-school education (42.9%), and were not working or were housewives (59.5%). Grade 1 hypertension was identified in 54.8% of respondents, while 59.5% reported a family history of hypertension and 57.1% had comorbidities. More than half were overweight or obese (54.8%). Although 64.3% regularly took antihypertensive medication and 59.5% routinely attended healthcare examinations, several respondents demonstrated irregular medication use and follow-up attendance.

Conclusion: Older adults with hypertension had diverse demographic and clinical characteristics requiring comprehensive management. Regular monitoring, medication-adherence support, nutritional counselling, physical activity, and family involvement should be strengthened to improve hypertension control and prevent complications.

Keywords: Older Adults; Hypertension; Patient Characteristics



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BACKGROUND

Hypertension is one of the most common chronic health problems among older adults and is a major contributor to cardiovascular disease, stroke, heart failure, kidney disease, cognitive decline, disability, and premature mortality (Tang et al., 2022). The condition requires particular attention in older populations because ageing is accompanied by structural and functional changes in the cardiovascular system, including arterial stiffness, reduced vascular elasticity, and increased peripheral resistance. These physiological changes make blood pressure more likely to increase with age (Maniyara et al., 2023). Hypertension is frequently asymptomatic, meaning that older adults may not recognize their condition until complications have developed. Therefore, understanding the characteristics of older adults with hypertension is essential for identifying vulnerable groups, planning appropriate interventions, improving treatment adherence, and preventing avoidable complications (Jobe et al., 2023).

Globally, hypertension remains a serious public health challenge. The World Health Organization estimated that approximately 1.4 billion adults aged 30–79 years were living with hypertension in 2024, representing around one-third of the global population in that age group (Han et al., 2023). Approximately two-thirds of people with hypertension live in low- and middle-income countries, where access to early detection, continuous treatment, medication, and routine blood pressure monitoring may remain limited (Ibrahim et al., 2023). Moreover, approximately 44% of adults with hypertension are unaware of their condition, and only slightly more than one in five have achieved adequate blood pressure control (Chan et al., 2024). The number of individuals living with hypertension increased from approximately 650 million in 1990 to 1.3 billion in 2019. The WHO has estimated that improving hypertension detection, treatment, and control could prevent approximately 76 million deaths between 2023 and 2050 (Neuendorff et al., 2024). These figures demonstrate the urgency of strengthening hypertension services, particularly at the primary healthcare level (Takahashi et al., 2024).

Older adults represent one of the groups most vulnerable to hypertension and its complications. In addition to biological ageing, hypertension among older adults may be influenced by sex, genetic predisposition, dietary patterns, excessive salt intake, limited physical activity, obesity, smoking, psychological stress, and a history of other chronic diseases (Kujawska et al., 2024). Socioeconomic and demographic characteristics, including educational level, employment history, income, living arrangements, and family support, may also affect health literacy, access to healthcare, medication adherence, and self-management practices. Consequently, older adults with hypertension do not constitute a homogeneous population. Each patient may have different risk profiles, healthcare needs, functional capacities, and barriers to controlling blood pressure (Cao et al., 2024).

In Indonesia, hypertension continues to place a substantial burden on individuals, families, and health services. The 2018 Basic Health Research reported that hypertension prevalence among adults aged 18 years or older, based on blood pressure measurements, increased from 25.8% in 2013 to 34.1% in 2018 (Kraft et al., 2024). More recent findings from the 2023 Indonesian Health Survey showed that hypertension prevalence among people aged 18 years or older was 30.8% based on blood pressure measurement, whereas only 8.6% reported having received a medical diagnosis. This difference of more than 20 percentage points indicates a considerable gap between the number of people who have hypertension and those who are aware of their condition (He et al., 2024). The discrepancy highlights the importance of regular screening and community-based monitoring because relying on symptoms or previous diagnoses may leave many cases undetected (Alsayed Hassan et al., 2024).

Primary healthcare centres have a strategic role in hypertension prevention and management through early detection, routine blood pressure measurement, health education, medication provision, risk-factor modification, and referral of patients with

complications (Frost et al., 2024). This role is especially important for older adults who may experience mobility limitations, multiple chronic diseases, polypharmacy, reduced memory, or dependence on family members. In this context, information regarding patient characteristics can assist healthcare professionals in adapting interventions to the actual needs of the population (Cui et al., 2023). Older adults with low educational attainment may require simpler educational materials, while those living alone may need stronger family or community support to maintain medication adherence and attend follow-up appointments.

Previous studies in Indonesia have extensively investigated the prevalence, determinants, treatment adherence, lifestyle, and complications of hypertension (Chen et al., 2024). However, many have focused on the general adult population or examined statistical relationships between individual risk factors and blood pressure control (Huang et al., 2024). Descriptive evidence specifically presenting the demographic and health-related characteristics of older adults with hypertension at the local primary healthcare level remains limited. Findings from national or provincial surveys cannot always describe the situation at a particular healthcare centre because communities differ in demographic composition, dietary habits, socioeconomic conditions, access to services, family support, and disease-management practices (Zhong et al., 2024). There is therefore a need for local data from the Poasia Primary Health Care Centre in Kendari to provide a more contextual understanding of older adults receiving hypertension services.

The novelty of this study lies in its comprehensive, context-specific description of older adults with hypertension at the Poasia Primary Health Care Centre. Rather than examining hypertension only through blood pressure values, this study characterizes affected older adults according to relevant demographic and clinical variables, such as age, sex, educational level, occupation, duration of hypertension, blood pressure category, family history, comorbidities, nutritional status, medication use, and healthcare-control patterns. The findings are expected to establish baseline information for designing age-sensitive and community-based hypertension interventions in the Poasia area. Therefore, this study aims to describe the characteristics of 42 older adults with hypertension at the Poasia Primary Health Care Centre in Kendari. The results are expected to support healthcare professionals and programme managers in determining priority groups, developing targeted education, strengthening routine monitoring, encouraging treatment adherence, and improving hypertension-control services for older adults.

METHODS

This study employed a quantitative descriptive design (Stading et al., 2024) to describe the characteristics of older adults with hypertension. The study was conducted at the Poasia Primary Health Care Centre, Kendari, Indonesia. The study population consisted of all older adults with hypertension who received healthcare services at the health centre during the research period. A total of 42 older adults were selected as respondents using purposive sampling.

The inclusion criteria were individuals aged 60 years or older, diagnosed with hypertension by a healthcare professional or having a systolic blood pressure of ≥ 140 mmHg and/or a diastolic blood pressure of ≥ 90 mmHg, registered or receiving treatment at the Poasia Primary Health Care Centre, able to communicate effectively, and willing to participate by signing an informed-consent form. Older adults who were seriously ill, experienced severe cognitive or communication disorders, or could not complete the data-collection process were excluded.

The study variable was the characteristics of older adults with hypertension. These characteristics included age, sex, educational level, occupational status, duration of hypertension, family history of hypertension, blood pressure category, nutritional status, comorbidities, antihypertensive medication use, and routine healthcare attendance. Age was categorized into 60–69 years, 70–79 years, and ≥ 80 years. Blood pressure was

measured using a calibrated sphygmomanometer after respondents had rested for at least five minutes. Measurements were conducted according to standard procedures, and blood pressure was classified based on the criteria adopted in the study protocol.

Data were collected using a structured questionnaire, respondents' medical records, anthropometric measurements, and direct blood pressure measurements. The questionnaire was used to obtain sociodemographic information, hypertension history, medication use, family history, comorbidities, and healthcare attendance. Body weight and height were measured to calculate body mass index and determine nutritional status. Medical records were reviewed, with the respondents' permission, to confirm hypertension diagnoses and relevant clinical information.

Before data collection, the researcher explained the objectives, procedures, benefits, and voluntary nature of participation. Respondents who agreed to participate signed an informed-consent form. Respondents who had difficulty reading or writing received assistance without influencing their answers. Each participant was assigned an identification code to maintain privacy and confidentiality.

The collected data were processed through editing, coding, data entry, cleaning, and tabulation. Data analysis was performed using univariate descriptive analysis. Categorical data were presented as frequencies and percentages, whereas numerical data were summarized using means and standard deviations or medians and ranges, depending on the distribution of the data. Because this was a descriptive study, no hypothesis testing or bivariate analysis was performed.

RESULTS

General Characteristics of Respondents

A total of 42 older adults with hypertension participated in this study. The respondents' mean age was 68.7 ± 6.5 years, ranging from 60 to 84 years. The mean systolic blood pressure was 156.4 ± 15.8 mmHg, while the mean diastolic blood pressure was 91.7 ± 9.6 mmHg.

Sociodemographic Characteristics

Table 1.

Sociodemographic Characteristics of Older Adults with Hypertension (n = 42)

Characteristics	Frequency (n)	Percentage (%)
Age group		
60–69 years	24	57.1
70–79 years	14	33.3
≥80 years	4	9.6
Sex		
Male	16	38.1
Female	26	61.9
Educational level		
No formal education	5	11.9
Primary school	18	42.9
Junior high school	9	21.4
Senior high school	7	16.7
Higher education	3	7.1
Occupational status		
Not working/housewife	25	59.5
Self-employed	8	19.0
Farmer/fisher	5	11.9
Retired	4	9.6
Total	42	100.0

Table 1 shows that most respondents were aged 60–69 years (57.1%), female (61.9%), and had completed primary school education (42.9%). More than half of the

respondents were not working or were housewives (59.5%). These findings indicate that the older adults with hypertension were predominantly women in the young-old age category with relatively low educational attainment.

Clinical Characteristics

Table 2.
Clinical Characteristics of Older Adults with Hypertension (n = 42)

Characteristics	Frequency (n)	Percentage (%)
Duration of hypertension		
<5 years	17	40.5
5-10 years	16	38.1
>10 years	9	21.4
Blood pressure category		
Grade 1 hypertension	23	54.8
Grade 2 hypertension	15	35.7
Grade 3 hypertension	4	9.5
Family history of hypertension		
Yes	25	59.5
No	17	40.5
Comorbidities		
Present	24	57.1
Absent	18	42.9
Nutritional status		
Underweight	3	7.1
Normal	16	38.1
Overweight	10	23.8
Obesity	13	31.0
Total	42	100.0

Table 2 demonstrates that 17 respondents (40.5%) had experienced hypertension for less than five years, while nine respondents (21.4%) had lived with the condition for more than ten years. More than half of the respondents had grade 1 hypertension (54.8%), followed by grade 2 hypertension (35.7%) and grade 3 hypertension (9.5%).

A family history of hypertension was reported by 25 respondents (59.5%). Comorbidities were present in 24 respondents (57.1%). Based on nutritional status, 13 respondents (31.0%) were obese and ten respondents (23.8%) were overweight. Therefore, 54.8% of respondents had excess body weight.

Types of Comorbidities

Table 3.
Distribution of Comorbidities Among Respondents (n = 42)

Comorbidity	Frequency (n)	Percentage (%)
Diabetes mellitus	9	21.4
Hypercholesterolemia	7	16.7
Cardiovascular disease	4	9.5
Kidney disease	2	4.8
Other chronic diseases	2	4.8
No comorbidity	18	42.8
Total	42	100.0

Table 3 shows that diabetes mellitus was the most common comorbidity, experienced by nine respondents (21.4%), followed by hypercholesterolemia in seven respondents (16.7%). Four respondents (9.5%) had cardiovascular disease, while kidney disease and other chronic conditions were each identified in two respondents (4.8%).

Medication Use and Healthcare Attendance

Table 4.

Antihypertensive Medication Use and Healthcare Attendance (n = 42)		
Characteristics	Frequency (n)	Percentage (%)
Antihypertensive medication use		
Regular	27	64.3
Irregular	11	26.2
Not taking medication	4	9.5
Routine healthcare attendance		
Routine	25	59.5
Not routine	17	40.5
Total	42	100.0

Table 4 indicates that 27 respondents (64.3%) regularly took antihypertensive medication. However, 11 respondents (26.2%) used medication irregularly, and four respondents (9.5%) were not taking antihypertensive medication. Regarding healthcare attendance, 25 respondents (59.5%) routinely attended health examinations, whereas 17 respondents (40.5%) did not routinely visit the healthcare facility.

Overall, older adults with hypertension at the Poasia Primary Health Care Centre were predominantly aged 60–69 years, female, had primary education, and were not working. Most respondents had grade 1 hypertension, a family history of hypertension, and at least one comorbidity. Although most regularly took antihypertensive medication and attended healthcare examinations, a considerable proportion demonstrated irregular medication use and follow-up attendance.

DISCUSSION

The findings demonstrated that most older adults with hypertension at the Poasia Primary Health Care Centre were aged 60–69 years. The mean age was 68.7 ± 6.5 years, with respondents ranging from 60 to 84 years. This finding indicates that hypertension was predominantly identified among respondents in the young-old age category. Increasing age is closely associated with elevated blood pressure because ageing causes physiological changes in the cardiovascular system, including arterial stiffness, reduced blood vessel elasticity, endothelial dysfunction, and increased peripheral vascular resistance. These changes increase systolic blood pressure and make hypertension more common among older adults. Consequently, regular blood pressure monitoring is essential even when older adults do not experience specific symptoms.

Most respondents were female (61.9%). The predominance of women may be associated with their greater use of primary healthcare services and longer life expectancy. Biological changes following menopause may also increase the risk of hypertension. Reduced estrogen levels can affect vascular protection, lipid metabolism, and arterial elasticity, thereby increasing cardiovascular risk. However, the larger proportion of women in this study should not be interpreted as evidence that hypertension exclusively affects women because men are also vulnerable, particularly when they have behavioural risk factors such as smoking, unhealthy dietary patterns, and insufficient physical activity (Roy et al., 2024).

Regarding educational level, 42.9% of respondents had completed only primary school, while 11.9% had no formal education. Low educational attainment may affect older adults' ability to obtain, understand, and apply health information. Patients with limited health literacy may experience difficulty understanding blood pressure targets, medication schedules, dietary restrictions, early signs of complications, and the importance of routine examinations. Therefore, hypertension education for older adults should use simple language, illustrations, demonstrations, and repetition. Family members should also be involved, especially when older adults have visual, hearing, memory, or literacy limitations.

More than half of the respondents were not working or were housewives. Occupational status may affect physical activity, social interaction, income, and access to healthcare. Retirement or unemployment may reduce work-related stress for some older adults, but it can also contribute to decreased physical activity and greater financial dependence. Limited income may create barriers to transportation, healthy food consumption, routine examinations, and continuous medication use. Primary healthcare programmes should therefore consider the social and economic circumstances of older adults when developing hypertension interventions (Johansen et al., 2024).

The results showed that 40.5% of respondents had experienced hypertension for less than five years, while 21.4% had lived with the condition for more than ten years. The duration of hypertension is clinically important because prolonged exposure to elevated blood pressure can progressively damage blood vessels and target organs. Older adults with long-standing hypertension are at greater risk of stroke, coronary heart disease, heart failure, kidney dysfunction, and cognitive impairment, particularly when their blood pressure remains uncontrolled. Long disease duration may also produce treatment fatigue, in which patients become less consistent in taking medication or attending follow-up examinations (Kim & Kim, 2024).

More than half of the respondents had grade 1 hypertension, while 35.7% had grade 2 hypertension and 9.5% had grade 3 hypertension. The mean blood pressure was 156.4/91.7 mmHg, indicating that elevated blood pressure remained a significant clinical problem among the respondents. Although grade 1 hypertension was the most frequent category, it should not be considered harmless. Persistent mild-to-moderate blood pressure elevation can contribute to cumulative cardiovascular damage. Respondents with grade 2 or grade 3 hypertension require more intensive evaluation because they face a higher risk of target-organ damage and acute cardiovascular events.

Hypertension is frequently referred to as a silent condition because many individuals do not recognize that they have high blood pressure. The 2023 Indonesian Health Survey showed that hypertension prevalence among adults aged 18 years or older was 30.8% based on blood pressure measurements, whereas only 8.6% reported a medical diagnosis. This substantial difference indicates that many cases remain undetected in the community (Guo et al., 2024). Therefore, routine community screening is necessary to identify hypertension before complications occur.

A family history of hypertension was reported by 59.5% of respondents. This finding suggests that genetic and shared familial factors may contribute to hypertension among older adults. Individuals with hypertensive family members may inherit a biological susceptibility to increased blood pressure. Family members may also share behavioural risk factors, including high salt consumption, high-fat diets, limited physical activity, smoking exposure, and ineffective stress management. Nevertheless, a family history is a non-modifiable factor and does not mean hypertension complications are inevitable. Modifiable behaviours, regular medication use, and continuous monitoring remain important for controlling cardiovascular risk (Cacciatore et al., 2024).

More than half of the respondents had at least one comorbidity. Diabetes mellitus was the most common comorbidity, followed by hypercholesterolemia and cardiovascular disease. The coexistence of hypertension and diabetes is particularly concerning because both conditions contribute to vascular damage and increase the risk of heart disease, stroke, kidney disease, and visual impairment. Hypercholesterolemia can accelerate atherosclerosis, while cardiovascular and kidney diseases may both result from and contribute to poorly controlled blood pressure. Older adults with multiple chronic conditions consequently require integrated management rather than treatment focused only on blood pressure (Buawangpong et al., 2024).

Regarding nutritional status, 23.8% of respondents were overweight and 31.0% were obese. Thus, more than half had excess body weight. Excess body fat may increase

blood pressure through activation of the sympathetic nervous and renin-angiotensin-aldosterone systems, insulin resistance, inflammation, and sodium retention. Obesity also increases the probability of diabetes, dyslipidaemia, and cardiovascular disease. The 2023 Indonesian Health Survey reported that national obesity prevalence among adults increased from 21.8% in 2018 to 23.4% in 2023. It also showed that 96.7% of Indonesians aged five years or older consumed insufficient portions of fruit and vegetables (Lee & Lee, 2024). These national patterns reinforce the importance of nutritional counselling and healthy-weight interventions.

Most respondents regularly used antihypertensive medication. Nevertheless, 26.2% used medication irregularly, and 9.5% were not taking antihypertensive medication. Irregular medication use can cause blood pressure fluctuations and increase the risk of complications. Older adults may fail to take medication because they feel healthy, fear adverse effects, forget the schedule, have difficulty obtaining prescriptions, or believe medication is unnecessary when symptoms disappear. Polypharmacy and cognitive decline may further complicate medication management (Ruksakulpiwat et al., 2024). Health professionals should regularly assess medication adherence, explain that hypertension often requires long-term treatment, simplify medication schedules where possible, and encourage family support (Liu et al., 2024).

Most respondents routinely attended healthcare examinations, although 40.5% did not attend regularly. Failure to attend scheduled examinations can delay the evaluation of blood pressure control, medication effects, and emerging complications. Regular visits allow healthcare professionals to adjust treatment, reinforce lifestyle recommendations, and conduct laboratory or organ-function assessments. Community health workers and family members can help identify older adults who miss appointments and support home-based monitoring when mobility or transportation barriers exist (García-Alfonso et al., 2024).

Overall, the characteristics identified in this study show that hypertension management among older adults requires an individualized and multidimensional approach. Healthcare services should not focus solely on blood pressure measurement but should also consider educational level, nutritional status, family history, comorbidities, medication practices, and healthcare attendance. The Poasia Primary Health Care Centre should strengthen regular screening, age-appropriate education, medication-adherence monitoring, nutritional counselling, physical activity programmes, and family involvement. This study provides useful baseline information regarding the characteristics of older adults with hypertension in the Poasia area. However, its descriptive design cannot determine causal relationships between respondent characteristics and hypertension severity or control. The relatively small sample of 42 respondents from one primary healthcare centre also limits the generalizability of the findings. Future studies should involve larger samples, multiple healthcare facilities, and analytical designs to examine the factors associated with blood pressure control, medication adherence, and hypertension-related complications among older adults.

CONCLUSION

This study concluded that older adults with hypertension at the Poasia Primary Health Care Centre were predominantly aged 60–69 years, female, had primary-school education, and were not working or were housewives. Most respondents had grade 1 hypertension, a family history of hypertension, and at least one comorbidity, particularly diabetes mellitus and hypercholesterolemia. More than half were overweight or obese. Although most respondents regularly took antihypertensive medication and attended healthcare examinations, a considerable proportion used medication irregularly or did not routinely attend follow-up visits. Therefore, the Poasia Primary Health Care Centre is encouraged to strengthen regular blood pressure monitoring, age-appropriate health

education, medication-adherence assessment, nutritional counselling, safe physical activity programmes, and early detection of hypertension complications. Educational interventions should use simple and easily understood language and actively involve family members and community health workers. Older adults are advised to take antihypertensive medication as prescribed, reduce salt and high-fat food consumption, maintain a healthy body weight, engage in physical activity according to their abilities, and attend scheduled examinations regularly. Future researchers should conduct analytical studies with larger samples across multiple healthcare facilities to identify factors associated with blood pressure control, treatment adherence, and hypertension-related complications among older adults.

ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to the management and healthcare professionals of the Poasia Primary Health Care Centre, Kendari, for granting permission and providing valuable support during this study. The authors also extend their deepest appreciation to all older adult respondents and their families for their willingness, time, and participation. Gratitude is also conveyed to all individuals and institutions that contributed guidance and assistance throughout the research and manuscript preparation process.

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