



Knowledge and Attitude of Hypertensive Patients towards Self-Care Practices in Mbala, Northern Province, Zambia

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Abstract

Introduction: Hypertension is a chronic non-communicable disease that poses significant global health challenges due to its high prevalence and the resulting cardiovascular, stroke, and chronic renal complications. It is the third leading preventable risk factor for premature death and disability worldwide. Poor knowledge about hypertension can lead to a poor attitude toward the disease, which may directly affect patients' self-care practices. There is a direct relationship between a patient's knowledge and the management of their illnesses. A good knowledge and attitude towards hypertension have been associated with controlled blood pressure, reduced cardiovascular risks, improved medication compliance, reduced morbidity and mortality. **Methods:** This was an analytical cross-sectional study where 200 respondents aged 18 years and above participated in the study. Participants were randomly selected, and a self-administered structured interview schedule was used to collect data. The Statistics Package for Social Sciences computer software package version 27.0 was used to analyze data. Chi-square and Fisher's exact tests were used to test the significance of the association between Knowledge on Hypertension, and Attitude towards self-care practices among Hypertensive patients. A 95% confidence interval and a P-value of 0.05, were used to ascertain the degree of significance. Multivariate binary logistic regression model to determine predictors of self-care practices. **Result:** The majority of the respondents 54%, had low knowledge levels. The majority (66%) of respondents, had good self-care practices. The majority (58%), had a positive attitude towards self-care practices while 42% had a negative attitude. Chi-square test on knowledge (P-value 0.017) and $P < 0.05$, indicates that there was an asso-

ciation between self-care practices and knowledge levels of Hypertensive patients and attitude (P-value 0.005), $P > 0.05$ indicates that there was an association between self-care practices and attitude of Hypertensive patients. Significant associations were found $P < 0.05$ between knowledge levels and self-care practices (P-value 0.017), and between attitude and self-care practices (P-value 0.005). On multivariable logistic analysis patients with low knowledge levels were 0.180 times less likely to achieve good self-care practices (OR: 0.180, CI: 0.024 - 0.723, $P < 0.017$) and those with a negative attitude were 0.168 less likely to achieve good self-care practices (OR: 0.168, CI: 0.058 - 0.594, $P < 0.005$). **Conclusion:** Low knowledge levels and negative attitudes of patients were the main reasons associated with poor self-care practices. Particular attention should therefore be given to ensuring that Hypertensive patients are given adequate information on hypertension self-care in order to improve their quality of life.

Subject Areas

Nursing

Keywords

Self-Care Practices, Knowledge, Attitude, Hypertension

1. Introduction

Hypertension (HTN) is a chronic non-communicable disease that presents significant global health challenges due to its high prevalence and the resulting cardiovascular, stroke, and chronic renal complications. It is the third leading preventable risk factor for premature death and disability worldwide [1]. Globally, the burden of disease attributable to hypertension has significantly increased from 4.5% in 2000 to 7% in 2010 [1]. This makes hypertension the single most common cause of morbidity, death, and disability worldwide, highlighting the urgent need for action to address the problem. In Zambia, hypertension is one of the leading causes of ill-health, premature mortality and disability [2].

According to World Health Organization (WHO), the prevalence of hypertension varies across regions and country income groups [3]. The WHO African Region has the highest prevalence of hypertension (27%) while the WHO Region of the Americas has the lowest prevalence of hypertension (18%) [3]. The number of adults with hypertension increased from 594 million in 1975 to 1.13 billion in 2015, with the increase seen largely in low- and middle-income countries [3]

Poor knowledge about hypertension can lead to a poor attitude towards the disease which may directly affect patients' self-care practices towards hypertension [4]. There is a direct relationship between a patient's knowledge and the management of their illnesses [4]. A good knowledge and attitude towards hypertension have been associated with controlled blood pressure, reduced cardiovascular risks, improved medication compliance, reduced morbidity and mortality [4].

In Zambia, non-communicable diseases (NCDs) account for up to a quarter of all deaths, with about half of these due to CVDs [5]. As life expectancy increases, this burden is expected to rise as well. There is a paucity of epidemiologic data on hypertension prevalence and treatment in Zambia. Like the vast majority of studies in sub-Saharan Africa, past studies in Zambia have used cross-sectional community survey designs with a single blood pressure (BP) measurement to define hypertension. Control of hypertension with high knowledge levels, a positive attitude and good self-care practices can greatly reduce complications like stroke and other cardiovascular events as there are very few studies that have examined and reported self-care practices among Hypertensive patients in Zambia. To address these gaps, we sought to determine the knowledge and attitudes of Hypertensive patients towards self-care practices.

According to WHO [2], if not controlled, hypertension can cause effects and serious damage to the heart. Excessive pressure can harden arteries, decreasing the flow of blood and oxygen to the heart. This elevated pressure and reduced blood flow can cause chest pain, also called angina, and a heart attack, which occurs when the blood supply to the heart is blocked and heart muscle cells die from a lack of oxygen. The longer the blood flow is blocked, the greater the damage to the heart. Heart failure, which occurs when the heart cannot pump enough blood and oxygen to other vital body organs, and irregular heartbeat, which can lead to sudden death. Hypertension can also burst or block arteries that supply blood and oxygen to the brain, causing a stroke. In addition, hypertension can cause kidney damage, leading to kidney failure. Therefore, it is important that a study be conducted to determine the knowledge and attitudes of hypertensive patients towards self-care practices in Mbala, Northern Zambia.

2. Materials and Methods

2.1. Study Design, Setting, and Participants

An analytical cross-section design was used to investigate the association between self-care practices and knowledge and attitude among hypertensive patients.

The study was conducted at Mbala General Hospital in Mbala as it is a third level Hospital that provides specialized health care in various disciplines including HTN management in Mbala. The study population comprised all confirmed hypertensive patients male and female, and above were surveyed over a period of two months (from November 2021 to January 2022) at Mbala General Hospital. They were considered eligible if they had been on HTN treatment for at least more than 6 months, had a blood pressure check-up profile and consented to participate. The study excluded patients who were very sick and unable to participate in the interview, mentally ill patients, and hypertensive patients who were not residents of Mbala. The study was conducted from January 2021 to April 2022.

2.2. Data Collection Procedure

Ethical clearance and permission were sought from the University of Zambia Bi-

omedical Research Ethics Committee (UNZABREC REF. No. 1662-2021) and interviews were conducted over a period of 10 weeks. Participants were assured of anonymity and confidentiality by interviewing them in private individually after consenting to participate with their signature. The researcher administered a questionnaire in face-to-face interviews that lasted about 30 minutes (See Appendix).

2.3. Instruments

A modified structured interview schedule was used to assess the self-care practice of hypertensive Patients in Mbala, Northern Province, Zambia. The tool was validated for measuring hypertensive patients' self-care practices by conducting a pilot study in a similar study setting. The instrument consisted of a series of questions that were closed-ended. The interview schedule contained questions under six sections; Section A: Demographic Characteristics (age, marital status, employment status, education level and income of the people within the population), Section B: knowledge on hypertension. Knowledge on HTN among patients was graded as high if the patient scored above 5 out of 10 questions on section B and was graded as low if the patient scored 3 and below out of 6 questions on Knowledge questions in section B. Section C: Attitude towards HTN and self-care practice. Attitude towards HTN and self-care practice among patients was graded as positive if the patient scored above 4 out of 8 questions on section C and was graded as negative if the patient scored 4 and below out of 8 questions in section C Section. Section D: self-care practices of hypertensive patients. Self-care practices of hypertensive patients was graded as good if the patient scored above 3 out of 6 questions on section D and was graded as poor if the patient scored 2 and below out of 6 questions in section D.

2.4. Data Analysis

Data were analyzed using the IBM® Statistical Package for Social Sciences (SPSS®) for Windows version 27.0. The Chi-square test was used to determine an association between predictor variables (demographic factors, knowledge of hypertensive patients on HTN, Attitude of hypertensive patients towards self-care practices) and the outcome variable (self-care practices among hypertensive patients). For those categorical variables, a Fisher's exact test was used. The Confidence Interval (CI) of (95%) was set and set level of significance at 5%. The binary logistic regression analysis was used to determine the true predictor of self-care practices.

3. Results

The interview was conducted with 200 participants of whom more than half 56% of the participants were females while 44% were males. Slightly less than half (40%) of the participants were aged between 31 and 40 years. Majority of the respondents 58% were married as presented in **Table 1**. **Table 2** shows that the majority of respondents (54%) had low knowledge levels while 46% had high knowledge levels, whereas **Table 2** shows that majority 58%, had a positive atti-

tude towards self-care practices while 2%, had a negative attitude 78.1%, had a negative attitude. **Table 2** shows that majority 66% of respondent, had good self-care practices while 34% had poor self-care practices.

Table 1. Demographic characteristics of the patients (n = 200).

Characteristics	Frequency	Percent
Gender		
Male	88	44%
Female	112	56%
Age		
18 to 30	28	14%
31 to 40	40	40%
41 to 50	44	22%
51 to 60	12	6%
Above 60 years	36	18%
Marital status		
Married	116	58%
Divorced	12	6%
Widowed	48	24%
Single	24	12%
Residence		
Urban	92	46%
Rural	108	54%
Employment status		
Formal employment	28	14%
Self-employed	80	40%
Not employed	92	46%

Table 2. Overall knowledge levels on hypertension (n = 200).

Characteristics	Frequency	Percent
High knowledge levels	92	46%
Low knowledge levels	108	54%
Overall attitude towards DM self-care practices (n = 200)		
Positive attitude	116	58%
Negative attitude	84	42%
Overall self-care practices (n = 200)		
Good	132	66%
Poor	68	34%

Table 3 shows that there was a statistically significant association between knowledge levels and self-care practices of hypertensive patients, between attitude and self-care practices of hypertensive patients.

Table 3. The relationship between self-care practices and other factors (n = 200) using a cross tabulation analysis.

Characteristics	Self-care practices		P value
	Good	Poor	
High knowledge levels	24 (23%)	91 (77%)	0.017
Knowledge			
Low knowledge levels	2 (2.3%)	83 (97.7%)	0.005
Positive attitude	14 (34.7%)	28 (65.2%)	
Attitude			
Negative attitude	10 (8.5%)	148 (91.5%)	

Table 4. Binary logistic regression analysis of self-care practices by knowledge and attitude.

Variables	Indicators	Odds ratio	Adjusted estimates P value	
			95%CI	
			lower	upper
High knowledge levels	Ref			
Knowledge				0.017
Low knowledge levels	0.18		0.024	0.723
Positive attitude	Ref			
Attitude				0.005
Negative attitude	0.168		0.058	0.594

Table 4 shows the binary logistic regression model was tested for multicollinearity, Hosmer and Leme show test of fitness for data, and omnibus test of model coefficients and classification accuracy. The dependent variable was self-care practice: Good (1) and Poor (0). The results of the binary logistic regression analysis showed that holding other variables constant, patients who had low knowledge levels were 0.180 times less likely to achieve good self-care practices compared to those who had high knowledge levels, and this effect was significant (OR: 0.180, CI: 0.024 - 0.723, $P < 0.017$). Further analysis showed that patients who had a negative attitude were 0.168 less likely to achieve good self-care practices compared to those who had a positive attitude and this effect was highly significant (OR: 0.168, CI: 0.058 - 0.0594, $P < 0.005$).

4. Discussion of Findings

Results revealed that the majority (56%) of participants were female, while 44%

were male. The results are contrary to the study results by Rahman *et al.* [6] and Shrestha *et al.* [7], which shows that the majority (55.83%) were male and 56.6% were male respectively. Therefore, the results of these studies contrast with the current study, which revealed a higher number of females than males. Therefore, it is highly likely that the high number of females compared to males could be associated with poor self-care practices among males thus, the higher number of male re-attendances and admissions to the hospital. According to a study by Goma *et al.*, [7] in Zambia, the prevalence of hypertension was 34.8% (38.0% of males and 33.3% of females). This is contrary to the current study with more females than males having hypertension in Mbala. This could have been affected by the small sample size.

In relation to age, it shows that the majority (40%) of respondents were aged between 31 and 40 years. These results correspond with the study that was conducted Rahman *et al.*, [6] which illustrates that 31.67%, of the respondents were 36 to 50 years. Similarly in another study by Shrestha *et al.* [7], 26.5% were in the age range of 30 - 40years. Regarding marital status, the majority of the respondents 58% were married.

With regards to knowledge on Hypertension, the majority of the respondents (54%), had low knowledge levels while 46% had high knowledge levels. Having low knowledge levels is a risk considering that in a study by Sinyinza [8] in Zambia, around 40% out of 100 UNZA employees have Hypertension and low knowledge about their own health status. Further low knowledge can serve as one of the contributing factors towards self-care practices. In the current study, low knowledge levels demonstrated by majority of respondents could be attributed to the peri-urban study settings in which the target population is less educated. Low education levels have a negative influence on how hypertensive patients will receive and understand information from health care workers and eventually contributing to poor self-care practices. Therefore, it is important for health care workers to take in account such a situation and emphasize on health education timely as well as coming up with strategies such as forming community support groups to help with continued health education.

The findings of this study agree with the studies by Mbewe *et al.* [9], which found that only 34.7% had good knowledge and Bilal, *et al.* [10], results stated that there was inadequate general knowledge of hypertension among cardiac patients and they do not recognize the significance of elevated SBP levels. The current study results are similar to the studies by Mbewe *et al.*, [9] and Bilal, *et al.* [10]. This could be due to the similar study settings and sample characteristics. Therefore, there is need to initiate programs that create community awareness regarding information on Hypertension self-care so that there is an improvement in self-care practices among Hypertensive patients.

In relation to attitude, majority 58%, had a positive attitude towards self-care practices while 42% had a negative attitude. One possible reason for the positive attitude towards self-care practices in this study could be the patients' beliefs and

expectations about various aspects of their plight, their own coping capacity and the health care system which influence the reports of a chronic condition, activity, disability and response to treatment. Some patients have adaptive beliefs and expectations about chronic conditions like Hypertension that promote their coping resources. In another context, the health care team also plays a role in either promoting a positive or negative attitude of such patients especially that Hypertension is a chronic condition.

The findings of this study agree with the studies conducted by Rahman, *et al.* [6], in which 85.68% had positive attitude toward hypertension. These results are slightly contrary to the studies conducted by Shrestha, *et al.* [7], in which 50.7% had a positive attitude. Results of the current study in Mbala agree with results of the studies by Rahman, *et al.* [6] and Shrestha, *et al.*, [7] in which majority of respondents revealed a positive attitude towards self-care practices among Hypertensive patients. This might be due to similar study setting involving general hospitals.

On assessing self-care practices, the researcher established that majority 66% of respondent, had good self-care practices while 34% had poor self-care practices. Overall the study showed good self-care practices which could have been because of awareness and knowledge regarding Hypertension care in Mbala. This could also be due to the positive attitude of hypertensive patients towards self-care practices. Findings of this study are not consistent with the studies conducted by Sarrafzadegan, *et al.* [11], which that uncontrolled BP group had lower levels of self-care score than controlled group and Hussien, *et al.* [1], whose results concluded that the prevalence of good self-care practice was low (29.9%). This discrepancy may be due to differences in population source, sample size, socio-economic status, and lifestyle in the study settings. Furthermore, the respondents in a current study demonstrated a positive attitude towards self-care practices. This is associated with the good practices showed by the majority of respondents.

According to the study results, there was an association between self-care practices and knowledge and attitude among hypertensive patients. In this study, it was revealed that there was an association between knowledge on Hypertension and self-care practices among Hypertensive patients. Therefore, in this study, respondents with high knowledge also had good self-care practice. These findings similar to the findings of Kebede *et al.* [12], whose study reviewed that knowledge was independently associated with practices towards lifestyle modification of hypertensive patients.

Results also revealed an association between attitude of hypertensive patients and their self-care practices. Therefore, majority of respondents who had a positive attitude also had good self-care practices. These findings are similar to the findings of Shrestha *et al.*, [7] whose attitude and self-care practices were found strongly associated with one another ($p = 0.002$).

On multivariable logistic analysis, patients who had low knowledge levels were 0.180 times less likely to achieve good self-care practices compared to those who

had high knowledge levels, and this effect was significant (OR: 0.180, CI: 0.024 - 0.723, $P < 0.017$). Further analysis showed that patients who had a negative attitude were 0.168 less likely to achieve good self-care practices compared to those who had a positive attitude and this effect was highly significant (OR: 0.168, CI: 0.058 - 0.594, $P < 0.005$).

The binary logistic regression test was used to analyze the combined impact of dependent (self-care practices) and independent variables (knowledge) and (attitude). All variables (dependent and independent variables) were coded. The results of the logistic regression analysis according to **Table 4** showed that holding other variables constant, patients with low knowledge levels were 0.180 times less likely to achieve good self-care practices, this effect was highly significant with the odds ratio of (OR: 0.180, CI: 0.024 - 0.723, $P < 0.017$). Knowledge plays a critical role in enabling patients to understand their condition and adopt appropriate self-care practices. Patients with high knowledge levels are more likely to recognize the importance of regular blood pressure monitoring, follow dietary recommendations, such as reducing salt intake and maintaining a healthy weight, adhere to prescribed medications and lifestyle modifications and understand the risks associated with uncontrolled hypertension, such as stroke and heart disease. Conversely, low knowledge levels may lead to misconceptions about hypertension, poor adherence to treatment, and neglect of preventive measures, ultimately resulting in poor self-care practices.

These findings are similar to the findings of Ikasaya, *et al.* [13], whose study reviewed that knowledge, attitudes and practices were statistically significant ($p = 0.023$). Similarly, in a study conducted by Hussen, *et al.* [1], whose study reviewed that good self-care practice was significantly associated with age, formal education, comorbidities, knowledge about hypertension.

Further analysis showed that patients with a negative attitude were 0.168 less likely to achieve good self-care practices, this effect was highly significant with the odds ratio of (OR: 0.168, CI: 0.058 - 0.594, $P < 0.005$). Attitude reflects patients' beliefs, perceptions, and motivation toward managing their condition. A positive attitude is associated with greater willingness to engage in self-care activities, such as regular exercise and dietary changes, higher compliance with medication regimens and follow-up appointments. Additionally, patients will show optimism about the effectiveness of treatment and lifestyle modifications in controlling hypertension. On the other hand, a negative attitude may stem from feelings of hopelessness, lack of trust in medical interventions, or misconceptions about the inevitability of complications. This can lead to poor self-care practices and increased risk of adverse health outcomes. These findings are similar to the findings of Shrestha, *et al.* [7], whose study reviewed that attitude and self-care practices were found strongly associated with one another ($p = 0.002$).

Both knowledge and attitude were independently associated with self-care practices, and their combined impact was significant. Knowledge and attitude are interrelated factors that influence self-care behaviors. For example, high knowledge

levels can foster a positive attitude by empowering patients with the information needed to manage their condition effectively while a positive attitude can motivate patients to seek knowledge and apply it in their daily lives. Together, these factors create a reinforcing cycle that promotes good self-care practices, leading to better health outcomes. Furthermore, the study highlights the need for targeted interventions to improve knowledge and attitude among hypertensive patients. Health education programs should focus on issues such as:

- Providing clear and accessible information about hypertension, its complications, and the benefits of self-care practices.
- Addressing misconceptions and fostering a positive outlook toward managing the condition.
- Using community-based approaches, such as peer support groups, to reinforce knowledge and promote positive attitudes.
- Tailoring interventions to the specific needs of patients with low knowledge levels or negative attitudes, especially in rural and peri-urban settings.

Generally, the associations observed in this study align with findings from other research in similar settings. Globally, studies have shown that knowledge and attitude are key determinants of self-care practices in chronic conditions like hypertension. This underscores the universal importance of patient education and psychological support in managing non-communicable diseases.

5. Conclusion

The study identified two factors (attitude and knowledge) as being significant in influencing self-care practices among hypertensive patients. This implies that, to improve self-care practices, there is a need to promote a positive attitude and provide adequate information on hypertension self-care. This can be achieved through continuous health education by health care workers, the formation of community peer support groups to promote awareness, and the dissemination of much more needed information through drama and role plays in order to improve the quality of life. The observed associations emphasize the need for a holistic approach to hypertension management that addresses both knowledge gaps and attitudinal barriers. By improving these factors, healthcare providers can empower patients to adopt better self-care practices, ultimately reducing the burden of hypertension-related complications.

6. Recommendations

1. The Ministry of Health should ensure that attention is focused on hypertension as a non-communicable disease with increasing prevalence and mortality rates and formulate guidelines for the management of hypertensive patients. Work place policies are disseminated and implemented with emphasis on the need for comprehensive health education towards Hypertensive patients.

2. Emphasis should be made in the nurse training curriculum on the importance of reinforcing the provision of vast information education and commu-

nication on self-care practices among Hypertensive patients to allow them to graduate as nurse educators upon completion of training.

3. Members of staff managing Hypertensive patients should intensify the provision of information Education and Communication (IEC) sessions during the follow-up visit to patients. The IEC should include reducing fat intake, performing regular exercises, adherence to drugs, checking of blood pressure and self-care management and keeping appointment schedules.

4. Support groups should be formed in communities in collaboration with the non-governmental organizations, health care providers and family members to assist Hypertensive patients in accessing recommended treatment services.

5. To have this study replicated using a larger sample in order to evaluate a large-scale representation of patients' self-care practices among Hypertensive patients.

7. Limitations of the Study

The study sample size (n = 200) was limited, thus generalization of results should be done with caution as it only represented views of patients who accessed medical services from Mbala general hospital. The sample size comprised patients from the rural and peri-urban settings, hence the result may not be generalized for the rest of Zambia. The case may be different from that of patients in urban towns, as urban hospitals have the availability of specialized health professionals to provide sufficient information on hypertension and self-care practices. The data collecting tool used comprised closed ended questions and this could have limited the respondents from giving more required information.

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Conflicts of Interest

The authors declare no conflict of interest regarding the publication of this article.

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Appendix

UNIVERSITY OF ZAMBIA

SCHOOL OF NURSING SCIENCES

QUESTIONNAIRE ON “Knowledge and Attitude of Hypertensive patients towards Self-care practices in Mbala, Northern Province, Zambia

QUESTIONNAIRE NO:

DATE OF INTERVIEW:

PLACE OF INTERVIEW:

NAME OF RESEARCHER:

INSTRUCTIONS

Read the instructions and understand. Where not clear, you are free to ask.

1. Do not write your name on the questionnaire.
2. Answer the questions either by ticking the most appropriate response(s) provided or by writing down the answers in the spaces provided.
3. The information obtained will be treated in strict confidence.
4. Give clear and simple explanations to the questions which requires an explanation.

SECTION A

DEMOGRAPHIC AND SOCIO-ECONOMIC FACTOR

1. What is your age?

1. 18 - 30 []
2. 31 - 40 []
3. 41 - 50 []
4. 51 - 60 []
5. 61 and above []

2. What is your marital status?

1. Married []
2. Divorced []
3. Widowed []
4. Single []
5. Other (Specify).....

3. Where do you reside?

1. Urban area
2. Rural area

4. What is your highest level of education?

1. Never been to school []
2. Primary level (grade 1 - 7) []
3. Junior secondary level (grade 8 - 9) []
4. Senior secondary level (grade 10 - 12) []
5. College []
6. University []

5. What is your employment status?

1. Employed for wages []

2. Self-employed []

3. Not employed []

Others specify.....

6. If not employed, how do you supplement your living?

.....

7. Do you smoke tobacco?

1. Yes

2. No

8. Do you use insunko?

1. Yes

2. No

9. Do you drink alcohol?

1. Yes

2. No

SECTION B

Knowledge questions

10. Hypertension is a condition related to high blood pressure.

1. Yes

2. No

11. Hypertension is curable

1. Yes

2. No

12. Do you know the different types of Hypertension?

1. Yes

2. No

13. Do you know what Blood Pressure check-up is?

1. Yes

2. No

14. Do you know how to measure Blood Pressure?

1. Yes

2. No

15. Do you know Hypertension can cause eye damage?

1. Yes

2. No

16. Do you know Hypertension is a genetic disease?

1. Yes

2. No

17. Do you know exercise can be helpful to prevent Hypertension?

1. Yes

2. No

18. Do you know that reducing salt intake can reduce Hypertension?

1. Yes

2. No

19. Do you know that reducing the body weight can help control Hypertension?

1. Yes
2. No

20. Do you know Hypertension can be controlled by avoiding smoking?

1. Yes
2. No

SECTION C Attitude questions:

21. Do you think Hypertensive patients should see their doctor only when they have a problem?

1. Yes
2. No

22. Do you think Hypertension can make you blind?

1. Yes
2. No

23. Do you feel that regular exercise is important?

1. Yes
2. No

24. “Do you think that controlling blood pressure with diet alone is superior to that of controlling blood pressure with diet and medications?”

1. Yes
2. No

25. Do you believe that there is not much use in trying to have good blood pressure control, because complications of Hypertension will happen anyway?”

1. Yes
2. No

26. Do you think that you should have a special diet?

1. Yes
2. No

27. Do you think that it is important to take your Hypertension medication every day?

1. Yes
2. No

28. Do you take your Hypertension medication every day?

1. Yes
2. No

SECTION D Self-care practices:

29. I check my blood pressure with attention.

1. All the time
2. Sometimes
3. Not all the time
4. Never at anytime

30. The food I choose to eat makes it easy to maintain normal blood pressure.

1. I agree
2. I strongly agree
3. I disagree
4. I strongly disagree

31. I keep all doctors' appointments recommended for my Hypertension treatment.

1. All the time
2. Sometimes
3. Not all the time
4. Never at anytime

32. I take my Hypertension medication (e. g. nifedipine) as prescribed.

1. All the time
2. Sometimes
3. Not all the time
4. Never at anytime

33. I do regular physical activity to achieve normal blood pressure.

1. All the time
2. Sometimes
3. Not all the time
4. Never at anytime

34. I strictly follow the dietary recommendations given by my physician.

1. All the time
2. Sometimes
3. Not all the time
4. Never at anytime