Preferred Treatment Regimen for Hypertension among Hypertensive Patients attending Outpatient Clinic in Ekiti State University Teaching Hospital, Ado Ekiti

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Abstract:

Approximately one billion people worldwide suffer from uncontrolled hypertension, and by 2025, that number is expected to rise to 1.5 billion. This study assessed the preferred regimen for hypertensive Patient among outpatient clinic in Ekiti State University Teaching Hospital. A descriptive design was used and a total number of 108 hypertensive patient in the outpatient clinic of Ekiti State University Teaching Hospital were recruited for the study using purposive sampling technique and data was collected using a self-developed questionnaire. The data was analyzed using descriptive statistics represented in tables and chart and chi square was used to analyze hypothesis using SPSS version 27.The study revealed that there was 91(91.0%) high adherence to medication regimen and 9(9.0%) low adherence to medication regimen. The factors influencing the preferred regimen for hypertensive patient include: availability of drugs in the chemists 79(79.0%), cost (unable to afford) 56(56.0%), busy schedule 58(58.0%), inadequate healthcare services 51(51.0%), lack of social support 56(56.0%), number of drugs taken per day 60(60.0%). The study also revealed that majority 29(29.0%) of the respondents are somewhat satisfied with the affordability of their current antihypertensive medication(s), 26(26.0%) are neutral, 22(22.0%) are very satisfied, 15(15.0%) are somewhat dissatisfied while 8(8.0%) are very dissatisfied. Findings also revealed that there is no significant relationship between age and adherence to

medication regimen. However, there is a significant relationship between: cost, lack of social support, lack of immediate benefits of treatment and level of adherence to medication regimen for hypertensive Patient. Based on these findings, recommendations were made for the government to provide health insurance coverage that includes the coverage for antihypertensive medications.

Keywords: Hypertensive patient, Outpatient clinic, Preferred regimen, Treatment,

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Introduction

The World Health Organization defines hypertension as continuously high blood pressure with a systolic reading of more than 140 mmHg and a diastolic reading of more than 90 mmHg (American Heart Association, 2023). Despite being preventable, hypertension is a significant global public health issue, with its prevalence on the rise, it remains the leading preventable cause of death worldwide (Sinha & Chowienczyk 2023). High blood pressure is the primary risk factor for cardiovascular diseases, accounting for at least 7.6 million deaths annually globally (or 13.5% of all deaths). The management of hypertension is still inadequate even with the availability of several efficient antihypertensive drugs that have been shown to lower cardiovascular morbidity and mortality. Less than 27% and 10%, respectively, of hypertensive patients in high-income and low-income countries have reached their target blood pressure (Tasic & Tadic 2022).

The prevalence of hypertension in Nigeria was estimated to be 28.9%, with a projected increase to 30.8% by 2030. The rising incidence of hypertension worldwide is attributed to a variety of lifestyle factors, including obesity, physical inactivity, a diet heavy in salt and unsaturated fats, and social habits like drinking alcohol and smoking cigarettes (Abass et al., 2020). Poorly controlled hypertension is a major cause of morbidity and mortality worldwide, particularly in Sub-Saharan Africa. In Nigerian tertiary hospitals, uncontrolled hypertension and its complications account for approximately 25% of emergency medical admissions. The burden of uncontrolled hypertension has increased in developing nations despite growing awareness of its complications because of issues with access to and availability of high-quality healthcare (DeMacro et al., 2014; Carey et al., 2018).

The report of a study by Adeoye et al. (2023) showed that less than 25% of patients had controlled blood pressure, despite receiving antihypertensive therapy, highlighting the influence of lifestyle and sociodemographic factors. Similarly, DiPalo and Barone (2020) emphasized that poor blood pressure control is significantly predicted by age and coexisting diabetes. Gorani et al. (2025) found a dose-response relationship between sodium reduction and blood pressure control, with greater effects observed in older, non-white, and high-risk populations. Powell-Wiley et al. (2021) reported an 89.2% medication adherence rate, though over half still had uncontrolled blood pressure, possibly due to unmeasured confounders such as counterfeit drugs. Akpor and Olowolaju (2022) reported 83.7% adherence to antihypertensive therapy, with improved adherence associated with stress management, belief in treatment efficacy, and controlled blood pressure. In contrast, non-adherence was more likely among older, married, divorced, obese, and smoking individuals. Abass et al. (2020) observed low hypertension knowledge among patients, with blood pressure control influenced by gender, comorbidity, dyslipidemia, and pill burden. Alsofyani et al. (2022) found high adherence (86%) among patients, associated with factors such as female gender, older age, higher income, unemployment, and frequent home blood pressure monitoring.

Therefore, this problem requires urgent attention; hence, this study was designed to determine the preferred regimen for hypertensive Patient in outpatient department in Ekiti State University Teaching Hospital.

Methodology

This study adopted a descriptive survey research design to assess the preferred antihypertensive regimen among patients attending the outpatient department of Ekiti State University Teaching Hospital (EKSUTH). The descriptive approach was considered appropriate because it enabled the systematic observation and description of variables as they naturally occurred, without any form of manipulation or intervention by the researcher. The study was carried out at EKSUTH, Ado-Ekiti, a major tertiary healthcare institution in Ekiti State, Nigeria. Established in April 2008, the hospital functions as a referral center for the state and its environs and provides comprehensive healthcare services across multiple medical specialties. In addition to service delivery, the hospital serves as a center for medical education, research, and training for healthcare professionals. The target population for the study comprised hypertensive patients attending the outpatient department of the hospital. A total of 100 hypertensive patients who met the inclusion criteria were involved in the study through a total enumeration method, which ensured that all eligible patients within the study period were included. A purposive, non-probability sampling technique was applied to select participants based on their clinical condition and relevance to the objectives of the study.

Data for the study were collected using a self-administered structured questionnaire written in English. The questionnaire consisted of 33 items organized into four sections. Section A contained eight items addressing the socio-demographic characteristics of respondents, while Section B consisted of six items focused on medication adherence. Section C included nine items that examined factors influencing patients' preference for specific antihypertensive regimens, and Section D addressed issues related to the accessibility and affordability of antihypertensive medications. To ensure the quality of the instrument, the questionnaire was subjected to validation by an expert supervisor, who assessed it for face, content, and construct validity. Necessary modifications were made based on the expert's feedback to ensure that the instrument adequately reflected the study objectives. Reliability of the instrument was established through a pilot study conducted among nurses at the Federal Teaching Hospital Ado Annex, using approximately ten percent of the sample size. This process helped to confirm the internal consistency and reliability of the questionnaire.

The data collection process spanned a period of three to four weeks. Prior to administering the questionnaires, the purpose of the study was clearly explained to potential participants, and informed consent was obtained. The questionnaires were administered and retrieved physically by the researcher on the same day to enhance response rate and completeness of data. Strict confidentiality was maintained throughout the study, and no identifying information was collected from participants. Data analysis was carried out using the Statistical Package for Social Sciences (SPSS) version 27. Both descriptive statistics, such as frequencies and percentages, and inferential statistics were employed to analyze the data, test hypotheses, and explore relationships among variables. Ethical considerations were rigorously observed, with ethical approval and formal permission obtained from Ekiti State University Teaching Hospital and the Head of Nursing Services at EKSUTH. Participants' rights to privacy, anonymity, and voluntary participation were fully respected in accordance with standard ethical research guidelines.

Results

Table 1: Socio-demographic data

Variables	Categories	Frequency (100)	Percent (100)
Age	<40years	48	48.0
	40-49 years	19	19.0
	50-59 years	24	24.0
	60years and above	9	9.0
Gender	Male	59	59.0
	Female	41	41.0
Marital status	Married	50	50.0
	Separated	6	6.0
	Single	38	38.0
	Widow	6	6.0
Occupation	Civil servants	52	52.0
	Farmers	2	2.0
	Retirees	4	4.0
	Unemployed	26	26.0
	Traders / artisans	16	16.0
Education	None	2	2.0
	Postgraduate	17	17.0
	Primary	3	3.0
	Secondary	16	16.0
	Tertiary	62	62.0
Domicile	Rural	26	26.0
	Urban	74	74.0
Level of monthly income	Lowest or equal 5000	15	15.0
	Over 5000	85	85.0
Duration of hypertension	< 6 months	41	41.0
	6-12 months	23	23.0
	1 - 5 years	20	20.0
	> 5 years	16	16.0

Table 1 above shows that majority 48(48.0%) of the respondents were <40years, 24(24.0%) were between 50-59years, 19(19.0%) were between 40-49years while 9(9.0%) were between the age of 60years and above. More than half 59(59.0%) of the respondents were male while 41(41.0%) were female. Based on marital status, half 50(50.0%) of the respondents were married, 38(38.0%) were single, 6(6.0%) were separated while the same proportion 6(6.0%) were widow; most 52(52.0%) of the respondents were civil servants, 26(26.0%) were unemployed, 16(16.0%) were traders / artisans, 4(4.0%) were retirees while 2(2.0%) were farmers. Majority 62(62.0%) of the respondents had tertiary educational qualification, 17(17.0%) had postgraduate, 16(16.0%) had secondary qualification, 3(3.0%) had primary qualification while 2(2.0%) had none. 74(74.0%) of the respondents resides in

urban area while 26(26.0%) resides in rural area. A larger percentage 85(85.0%) of the respondents had over 5000 as monthly income while 15(15.0%) had lowest or equal 5000. Based on duration of hypertension, 41(41.0%) of the respondents said < 6 months, 23(23.0%) said 6-12 months, 20(20.0%) said 1 - 5 years while 16(16.0%) of the respondents said > 5 years.

Figure 1 showing the duration of hypertension
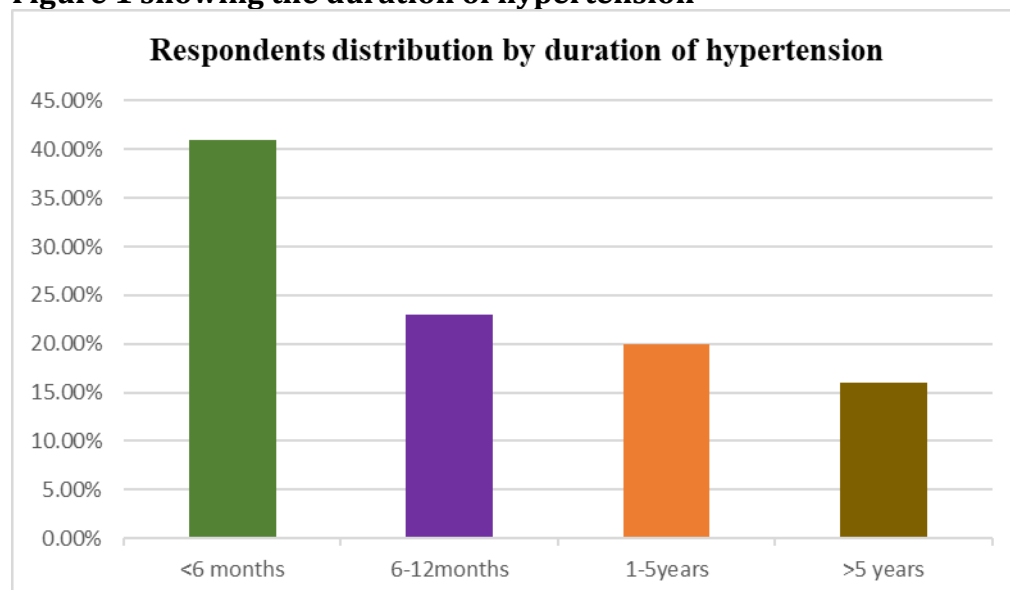
From the bar chart above, the duration of hypertension among the respondents revealed that most 41(41.0%) of the respondents said < 6 months, 23(23.0%) said 6-12 months, 20(20.0%) said 1 - 5 years while 16(16.0%) of the respondents said > 5 years.

Table 2: Adherence to medication regimen for hypertensive patient in outpatient department

Variables	Categories	Frequency (100)	Percent (100)
How do you obtain anti-HTN medications	Free	14	14.0
	Paid	86	86.0
Did you take all your medications yesterday	No	12	12.0
	Yes	88	88.0
How many medications do you take in a day	1	23	23.0
	2	52	52.0
	3 and above	25	25.0
When do you take your medication	As prescribed	81	81.0
	When blood pressure is high	16	16.0
	When I wish	3	3.0
Do you believe that your treatment is helpful	No	1	1.0
	Yes	99	99.0

| Do you think that non-adherence to medication will affect your health status | No | 13 | 13.0 |
| | Yes | 87 | 87.0 |

The table above revealed that most 86(86.0%) of the respondents pay for anti-HTN medications while 14(14.0%) obtain it for free, 88(88.0%) take all their medications yesterday while 12(12.0%) don't. More than half 52(52.0%) of the respondents take medication 2 times a day, 25(25.0%) take it once a day while 23(23.0%) take it more than 3 times a day. Majority 81(81.0%) of the respondents take their medication as prescribed, 16(16.0%) take it when blood pressure is high while 3(3.0%) take it as they wish. A larger percentage 99(99.0%) of the respondents believed that the treatment is helpful while 1(1.0%) said no. 87(87.0%) of the respondents believed that non-adherence to medication will affect their health status while 13(13.0%) said no.

The table showed the level of adherence to medication regimen for hypertensive Patient among outpatient department. The analysis revealed that that there were 91(91.0%) high adherence to medication regimen and 9(9.0%) low adherence to medication regimen for hypertensive patient in outpatient department. This has answered research question one which seeks to determine the level of adherence to medication regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital.

Table 3: Overall level of adherence to medication regimen for hypertensive patient in outpatient department

Adherence to medication regimen for hypertensive patient	Freq	%
High adherence	91	91.0
Low adherence	9	9.0
Total	**100**	**100**

Table 3 shows that there were 91(91.0%) high adherence to medication regimen and 9(9.0%) low adherence to medication regimen for hypertensive patient in outpatient department.

Figure 2: Adherence to medication regimen for hypertensive patient in outpatient department

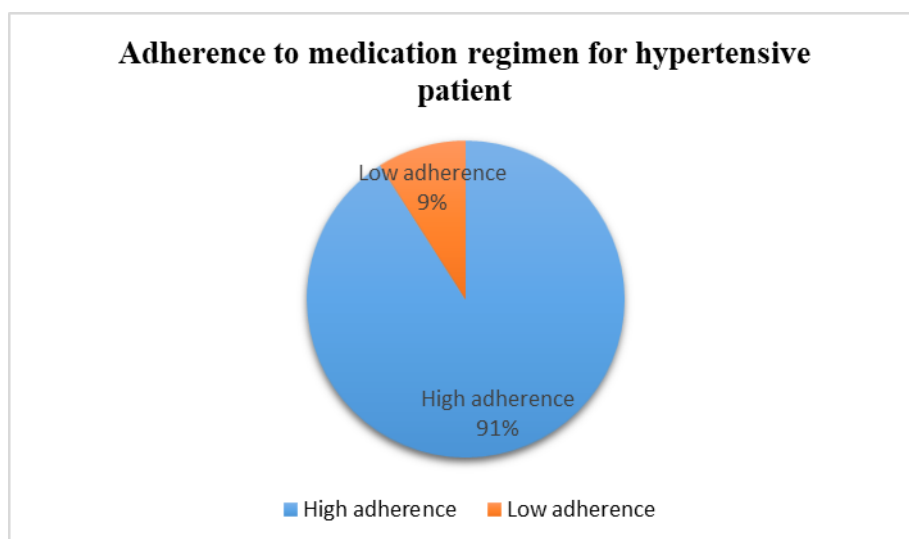Adherence to medication regimen for hypertensive patient

Figure 2 above show that there were 91(91.0%) high adherence to medication regimen and 9(9.0%) low adherence to medication regimen for hypertensive patient in outpatient department.

Table 4: Factors influencing the preferred regimen for hypertensive patient in outpatient department

Variables	Yes	%	No	%
Related side effects	48	48.0	52	52.0
Availability of drugs in the chemists	79	79.0	21	21.0
Cost (unable to afford)	56	56.0	44	44.0
Didn't like the medication taste	43	43.0	57	57.0
Busy schedule	58	58.0	42	42.0
Inadequate healthcare services	51	50.6	49	49.4
Lack of social support	56	56.0	44	44.0
Number of drugs you take per day	60	60.0	40	40.0
Lack of immediate benefits of treatment	48	48.0	52	52.0

Table 4 revealed the factors influencing the preferred regimen for hypertensive patient in outpatient department. This include: Availability of drugs in the chemists 79(79.0%), cost (unable to afford) 56(56.0%), busy schedule 58(58.0%), inadequate healthcare services 51(51.0%), lack of social support 56(56.0%), number of drugs taken per day 60(60.0%). This has answered research question two which seeks to identify the factors influencing the preferred regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital.

Table 5: Assessment of the affordability and accessibility of different antihypertensive medications for patients attending the outpatient department

Variables	Categories	Frequency (100)	Percent (100)
Do you face any challenge in accessing	No	77	77.0

your prescribed antihypertensive medication(s)	Yes	23	23.0
If yes please specify **(N=23)**	Affordability	8	8.0
	Not always available	15	15.0
Are the prescribed antihypertensive medication(s) readily available at the pharmacy or healthcare facility you visit	No, often face stock outs	11	11.0
	Yes, always	35	35.0
	Yes, but sometimes face stock outs	54	54.0
Have you ever experienced switching to a different antihypertensive medication due to affordability issues	No	51	51.0
	Yes	49	49.0
Do you have health insurance coverage that include the coverage for antihypertensive medications	No	69	69.0
	Yes	31	31.0
If yes, does it fully or partially cover the cost of your anti-hypertensive medications **(N=31)**	Fully	13	13.0
	Partially	18	18.0
Have you ever skipped your doses or reduced the dosage of your antihypertensive medication due to financial constraints	No	48	48.0
	Yes	52	52.0
How would you rate the overall affordability of antihypertensive medications in your area	Affordable	29	29.0
	Expensive	34	34.0
	Neutral	28	28.0
	Very affordable	9	9.0
How satisfied are you with the affordability of your current antihypertensive medication(s)	Neutral	26	26.0
	Somewhat dissatisfied	15	15.0
	Somewhat satisfied	29	29.0
	Very dissatisfied	8	8.0
	Very satisfied	22	22.0

The table 5 above showed the revealed the affordability and accessibility of different antihypertensive medications for patients attending the outpatient department. Majority 77(77.0%) of the respondents did not face any challenge in accessing prescribed antihypertensive medication(s), 15(15.0%) said it is not always available, 54(54.0%) said the prescribed antihypertensive medication(s) sometimes face stock outs, 51(51.0%) did not experience switching to a different antihypertensive medication due to affordability issues, 69(69.0%) of the respondents did not have health insurance coverage that include the

coverage for antihypertensive medications, 18(18.0%) out of the respondents said it partially cover the cost of anti-hypertensive medications, 52(52.0%) of the respondents have skipped doses or reduced the dosage of antihypertensive medication due to financial constraints, 34(34.0%) of the respondents said the overall affordability of antihypertensive medications in their area is expensive, 29(29.0%) of the respondents are somewhat satisfied with the affordability of their current antihypertensive medication(s). This has answered research question three which seeks to determine the affordability and accessibility of different anti-hypertensive medications for patient attending the outpatient department in Ekiti state university Teaching Hospital.

Figure 3: Affordability and accessibility of different antihypertensive medications for patients attending the outpatient department
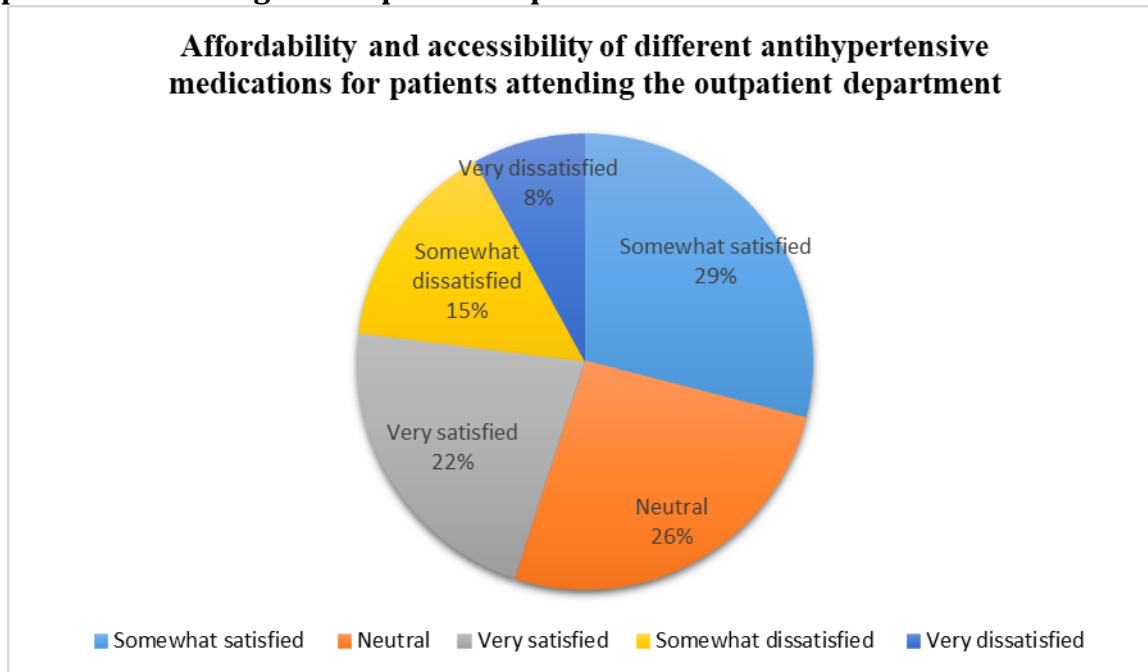

Figure 3 above show that majority 29(29.0%) of the respondents are somewhat satisfied with the affordability of their current antihypertensive medication(s), 26(26.0%) are neutral, 22(22.0%) are very satisfied, 15(15.0%) are somewhat dissatisfied while 8(8.0%) are very dissatisfied.

Testing hypotheses

Ho1: There is no significant relationship between age and adherence to medication regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital.

Table 6: Relationship between age and adherence to medication regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital.

Variables	Adherence to medication		Total	χ^2	Df	P-value

		regimen for hypertensive Patient					
		High	Low				
Age	<40years	3	45	48	3.479ª	3	0.323
	40-49 years	4	15	19			
	50-59 years	4	20	24			
	60years and above	1	8	9			

χ^2- *Pearson chi square value, df-degree of freedom, P -Probability value, *-significant at P<.050*
Since the P-Value is greater than 0.05 level of significance, the alternative hypothesis rejected, and null hypothesis accepted. Therefore, there is no significant relationship between age and adherence to medication regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital.

Ho2: There is no significant relationship between factors influencing the preferred regimen for hypertensive Patient and level of adherence to medication regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital

Table 7: Relationship between factors influencing the preferred regimen for hypertensive Patient and level of adherence to medication regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital

Factors influencing the preferred regimen for hypertensive Patient		Adherence to medication regimen for hypertensive Patient		Total	X^2	Df	P-Value	Remark
		Low	High					
Related side effects	No	4	48	52	1.904 ª	1	0.168	Rejected
	Yes	8	40	48				
Availability of drugs in the chemists	No	3	18	21	0.132 ª	1	0.717	Rejected
	Yes	9	70	79				
Cost (unable to afford)	No	2	42	44	4.135 ª	1	***0.042**	**Accepted**
	Yes	10	46	56				
Didn't like the medication taste	No	4	53	57	3.116 ª	1	0.078	Rejected
	Yes	8	35	43				
Busy schedule	No	2	40	42	3.593 ª	1	0.058	Rejected
	Yes	10	48	58				
Inadequate healthcare services	No	5	45	50	0.379 ª	1	0.538	Rejected
	Yes	7	43	50				

Lack of social support	No	1	43	44	7.040 a	1	*0.008	Accepted
	Yes	11	45	56				
Number of drugs taken per day	No	6	34	40	0.568 a	1	0.451	Rejected
	Yes	6	54	60				
Lack of immediate benefits of treatment	No	3	49	52	3.983 a	1	*0.046	Accepted
	Yes	9	39	48				

χ^2-Pearson chi square value, df-degree of freedom, P -Probability value, *-significant at $P<.050$

Since the P-Value (0.042, 0.008 & 0.046) is less than 0.05 level of significance, the null hypothesis rejected, and alternative hypothesis accepted. Therefore, there is a significant relationship between: cost, lack of social support, lack of immediate benefits of treatment and level of adherence to medication regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital.

Discussion of Findings

The study revealed that majority 48(48.0%) of the respondents were <40years. However, Alsofyani et al. (2022) in their study discovered that age over 65 were risk factors for medication adherence. Adeoye et al. (2023) in their study showed that 57.1% (n=196) of the patients were over 60 years old with a mean age and standard deviation of 3.36 ± 0.72. Mwenda et al. (2020) in the patients surveyed had an average age of 51 years, with a larger percentage being over 40. The table also revealed that more than half 59(59.0%) of the respondents were male. This is not in line with the findings of Adeoye et al. (2023) which showed that 63.3% and 64.3% of the patients with diabetes and hypertension were female. Alsofyani et al. (2022), of the 549 patients included, found that high adherence levels were linked to factor such as female gender.

The analysis revealed that that there were 91(91.0%) high adherence to medication regimen and 9(9.0%) low adherence to medication regimen for hypertensive patient in outpatient department. Contrastingly, Sarkodie et al. (2020) reported an 89.2% adherence rate to oral antihypertensive medications. Alsofyani et al. (2022) also found in their study that eighty-six percent of the patients exhibited good adherence. Nonetheless, over 50% of the participants seemed to have uncontrolled blood pressure. Weisser et al., (2020) found in their study that 84 percent of patients with uncontrolled blood pressure had partial or complete nonadherence to antihypertensive therapy, accounting for 45 percent of all hypertension patients. Akpor & Olowolaju (2022) findings also revealed that the participants' level of medication adherence was relatively low (50.4%).

A larger percentage 99(99.0%) of the respondents believed that the treatment is helpful while 1(1.0%) said no. Similarly, according to Abbas et al.'s (2020) findings, there was a significant reduction in the likelihood of non-adherence to treatment among patients who believed in the efficacy of their treatment (OR = 0.31, 95% CI [0.14–0.76]). Akpor & Olowolaju's findings from 2022 found that 44.4% of the participants reported being satisfied with their treatment.

This study revealed the factors influencing the preferred regimen for hypertensive patient, this include: Availability of drugs in the chemists 79(79.0%), cost (unable to afford) 56(56.0%), busy schedule 58(58.0%), inadequate healthcare services 51(51.0%), lack of

social support 56(56.0%), number of drugs taken per day 60(60.0%). These factors were also mentioned by Alsofyani et al. (2022) and Sinha and Chowienczyk (2023).

Alsofyani et al. (2022) discovered in their study that the following factors prevented people from taking their medications: lack of availability (15.8%), financial concerns (22.2%), and lack of confidence in the drugs' ability to control the disease (13.3%). Adeoye et al., (2023) also found in their study that the most important factors influencing antihypertensive drug adherence are inadequate patient education and perception of hypertension, forgetfulness, inadequate healthcare services and medication supply, quality shortage of health services, and lack of social support, particularly for older adults.

The study revealed that majority 29(29.0%) of the respondents are somewhat satisfied with the affordability of their current antihypertensive medication(s), 26(26.0%) are neutral, 22(22.0%) are very satisfied, 15(15.0%) are somewhat dissatisfied while 8(8.0%) are very dissatisfied. The outcome of this study corroborates the findings of Akpor & Olowolaju (2022) that 44.4% of the participants reported being satisfied with their treatment. Oseni et al., (2023) also found in their study that higher levels of patient satisfaction are linked to better health outcomes and greater adherence to treatment protocols.

This study revealed that there was no significant relationship between age and adherence to medication regimen for hypertensive patient in the outpatient department of Ekiti State University Teaching Hospital with (P=0.323, X^2 Cal=3.479[a]). However, Alsofyani et al. (2022) found in their study that high adherence levels were linked to factor such as age ≥60 years. Akpor & Olowolaju (2022) results of the test of association between participants' sociodemographic characteristics and treatment satisfaction showed that age ($\chi2$ = 23.773, P = 0.003) were significantly correlated.

The findings of this study also revealed that there was a significant relationship between: cost, lack of social support, lack of immediate benefits of treatment and level of adherence to medication regimen for hypertensive Patient among outpatient department in Ekiti State University Teaching Hospital with (P=0.042, X^2 Cal=4.135[a]), (P=0.008, X^2 Cal=7.040[a]) and (P=0.046, X^2 Cal=3.983[a]) respectively. Similarly, Win et al., (2021) found in their study that the most important factors influencing antihypertensive drug adherence are inadequate patient education and perception of hypertension, forgetfulness, inadequate healthcare services and medication supply, quality shortage of health services, and lack of social support, particularly for older adults.

Conclusion

The study concludes that there were high adherence to medication regimen among hypertensive patient in the outpatient department which is influenced by cost, lack of social support and lack of immediate benefits of treatment. The respondents were somewhat satisfied with the affordability of their current antihypertensive medication(s). Factors influencing the preferred regimen for hypertensive patient include: availability of drugs in the chemists, cost (unable to afford), busy schedule, inadequate healthcare services, lack of social support and number of drugs taken per day.

Recommendations

Base on the findings in the study, the following recommendations are made:

1. Government should provide health insurance coverage that include the coverage for antihypertensive medications.
2. Nurses should health educate patients about the benefits of medication adherence.
3. Government should made antihypertensive medications free and accessible to patients.
4. Family members including the society should provide social support for hypertensive patient and encourage them to take their medication.

References

Abbas, H., Kurdi, M., de Vries, F., van Onzenoort, H. A. W., Driessen, J. H. M., Watfa, M., & Karam, R. (2020). Factors Associated with Antihypertensive Medication Non-Adherence: A Cross-Sectional Study Among Lebanese Hypertensive Adults. *Patient preference and adherence*, *14*, 663–673. https://doi.org/10.2147/PPA.S238751

Adeoye, A., Akpor, O., Oguntola, S., & Akpor, O. (2023). Treatment expectation among patients with diabetes and hypertension in a tertiary hospital, Ekiti State, Southwest Nigeria: a cross-sectional study. *The Pan African medical journal*, *45*, 143. https://doi.org/10.11604/pamj.2023.45.143.38577

Akpor, O, A., Olowolaju, F,O. (2022). Treatment satisfaction and medication adherence among hypertensive patients in a teaching hospital in Ekiti State, Nigeria[J].Journal of Integrative Nursing, 2022, 4(2): 59-67. Available at: http://www.zxyjhhl.net.cn/EN/10.4103/jin.jin_4_22

Alsofyani, M. A., Aloufi, A. O., Al-Qhtani, N. S., Bamansour, S. O., & Almathkori, R. S. (2022). Factors related to treatment adherence among hypertensive patients: A cross-sectional study in primary healthcare centers in Taif city. *Journal of family & community medicine*, *29*(3), 181–188. https://doi.org/10.4103/jfcm.jfcm_153_22

American Heart Association, (2023). Understanding Blood Pressure Readings. Retrieved from: https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings

American Psychological Association. (2023). Health Belief Model. Retrieved from: https://psycnet.apa.org/record/2004-12702-035

Carey, R.M., Calhoun, D.A., Bakris, G.L., (2018). Resistant hypertension: detection, evaluation, and management. A scientific statement from American Heart Association. *Hypertension* 72, e53-e90

DeMacro, V.G., Aroor, A.R., Sowers, J.R. (2014). The pathohysiology of hypertension in patients with obesity. *Nat Rev Endocrinol10*, 364-376

Di Palo, K.E., & Barone, N.J. (2020) hypertension and heart failure, prevention targets and treatment. *Heart fail clinical* 16, 99-106

Gorani, S.M. et al. (2025). Hypertension a continuing public healthcare issue. *Int j of mol Science* 26(1), 123-129

Powell-Wiley, T.M., Poirier, P. et al., (2021). Obesity and cardiovascular diseasae a scientific statement from the American heart association. *Circulation* 143, e984-e1010

Sinha, M.D. & Chowienczyk, P. (2023). Cardiovascular influences on blood pressure in pediatric hypertension, 5th ed.: Springer: London, UK

Tasic, T & Tadic, M. (2022). Hypertension in Women. Front. *Cardiovascular Med* 9, 905504

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