Influence of Patient Satisfaction on Medication Adherence among Adult Hypertensives Attending a Health Facility in a Resource-Limited Environment in Southern Nigeria

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Abstract

Background: Hypertension is a noncommunicable disease known to cause serious morbidity and mortality among adult population. In Nigeria, a developing nation currently experiencing harsh economic realities, the outcome of the disease can be influenced by the effect of various components of patient satisfaction on medication adherence. **Aim:** The aim of this study was to evaluate the influence of patient satisfaction on medication adherence and BP control among adult hypertensives attending the Medical OutPatient (MOP) Clinic of the Federal Medical Centre, Asaba, with a view to identifying those aspects of care that need improvement in health care settings thereby leading to improved patient satisfaction, better medication adherence and ultimately better BP control. **Patients, Materials and Methods:** This was a cross sectional study conducted among 200 adult hypertensive patients attending the MOP Clinic of the Federal Medical Centre, Asaba, from January 15th to April 15th, 2017. A semi-structured questionnaire consisting of four sections which are: sociodemographic characteristics, Modified 4-item Morisky Medication Adherence scale, patient satisfaction levels with services, and BP measurement were used for data collection. **Results:** A greater proportion 87 (43.5%) of the respondents rated overall satisfaction with care received as very good, while 23 (11.5%) rated it as being fair. A statistically significant relationship was noticed between overall levels of satisfaction with care and medication adherence, $P < 0.001$. The level of BP control among the respondents was also significantly associated with medication adherence, $P < 0.001$. **Conclusion:** Patient satisfaction was seen to have a significant association with medication adherence but not BP control. The custodians of health should endeavor to improve patient satisfaction among patients in the hospital as this study showed improved patient satisfaction to be associated with increased patient adherence to medication with attendant better BP control.

Keywords: Health facility, hypertensives, medication adherence, patient satisfaction, Southern Nigeria

Introduction

Worldwide, hypertension is a known cause of serious morbidity and mortality outcomes in affected population. Research studies estimate almost ten million people killed worldwide yearly by raised blood pressure (BP).[1,2] Hypertension is one of the most common pathological conditions leading to disability and death among the adult Nigerian population and it plays an important role in the causation of heart failure, cardiac arrests, stroke, and kidney failure among Nigerians[3,4] Due to paucity of data, the burden of hypertension in Nigeria might be underestimated.[5] Ignorance of the disease or lack of adherence to medical treatment of hypertension can lead to various complications associated with uncontrolled elevated BP.

Drugs when prescribed aid in lowering BP alongside adjuvants like lifestyle modification and dietary measures. If these drugs are not taken, those morbidities earlier listed could develop. Despite advances made to improve medication adherence such as once-daily dosing regimens and drug formulation

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to decrease adverse reactions, adherence to antihypertensive drugs remain low resulting in increase in uncontrolled BP.[6]

According to the Joint National Committee 7 (JNC 7), hypertension is defined as a physician office systolic BP level of ≥140 mmHg and diastolic BP of ≥90 mmHg. Normal BP is read as a systolic BP <120 mmHg and diastolic BP <80 mmHg. Prehypertension is defined as the area between systolic BP of 120–139 mmHg and diastolic BP of 80–89 mmHg.[7]

Medication adherence is defined as the patient's conformance with the provider's recommendation with respect to timing, dosage, and frequency of medication taken during the prescribed length of time.[8] Nonadherence has persisted in being an issue for healthcare providers and service users in both developed and developing countries.[9] The consequences of nonadherence on therapeutic outcomes are a very significant but often unrecognised risk factor universal to all patient populations particularly those with chronic illness that involves complicated and long-term drug regimen.[9] Adherence to hypertensive medication as a result of patient satisfaction will reduce associated comorbidities and mortality.

Patient satisfaction as a research concept has a long history and remains a strong topic of scientific investigation. Patient satisfaction studies have since been proven to be a useful means of measuring health services and have brought about the application of new and better strategies to improve the health sector based on the voice of the patient.[10] Risser in 1975 first defined patient satisfaction as the degree of convergence between the expectations the patients have of ideal care and their perception of the care they really get.[11] Patient satisfaction surveys are increasingly being promoted in developing countries for many reasons. Some of these reasons are that they point out those aspects of care that need improvement in health care settings. The surveys are usually simple, fast, and cheap to administer. Family physicians as primary care physicians have found that the surveys are very important for developing means by which the primary health care services are better utilise. Furthermore, they help to give feedback to medical staff about their successes as well as failures thus assisting them to be more responsive to their patients' needs. The surveys also allow management to make informed decisions rather than guesswork in the important task of managing public expectations and resources.[12,13]

The aim of this study was to evaluate the influence of patient satisfaction on medication adherence and BP control among adult hypertensives attending the Medical OutPatient (MOP) Clinic of the Federal Medical Centre, Asaba, with a view to identifying those aspects of care that need improvement in health care settings thereby leading to improved patient satisfaction, better medication adherence and ultimately better BP control.

PATIENTS, MATERIALS AND METHODS

Design
This was a hospital-based cross-sectional study.

Setting
The study was conducted between January 15th and April 15th, 2017 (3 months) in the Hypertension Clinic which is a specialty clinic under the MOP Clinic for hypertensive patients in Federal Medical Centre, Asaba. It runs every Wednesday between 9.00 am and 4.00 pm. On the average, the clinic attends to about 3000 patients every year.

Selection criteria
Hypertensive patients of either sex from the ages of 18 years and above who have been on medication for at least 3 months and who have had not <3 clinic visits, who gave consent were selected. Hypertensives with other comorbidities were included in the study. Critically ill patients were excluded from the study. In addition, hypertensive hospital staff were excluded to prevent bias.

Sample size
The duration of the study was for 3 months. Records from the Department of Health Information Management of the hospital indicate that 250 patients attend the Hypertension Clinic each month which makes the study population to be 750. The sample size was determined using the Leslie Kish statistical formula ($N = p (1 − p) Z^2/d^2$) for estimating sample size for health studies and the formula for where the population is less the 10,000.[14,15] The proportion in the target population estimated to have a particular characteristic (p), in this instance regular medication adherence, was taken as 12.7% from a previous study on hypertensive patients done in a Niger-Delta semi-urban community.[16] This assumes a 95% confidence interval with a 5% margin of error. This gave a calculated sample size of 137 which was increased to 200 to improve the power of the study.

Sampling
A systematic sampling method with a sampling interval of every 4th patient on each clinic day was used to recruit the 200 participants. Systematic sampling involves selecting subjects from an ordered sampling frame. The sampling interval was obtained using the estimated study population and the sample size:

$$\text{Sampling interval } k = \frac{\text{Estimated Study population}}{\text{Sample size}} = \frac{N}{nf} = \frac{750}{200}$$

$$= 3.75 \left(\text{approximately 4} \right)$$

So from the study population of 750, every 4th patient who came to the clinic was recruited at an average of 67 patients for each month until the sample size of 200 was drawn. The number of subjects recruited daily varied according to the population that presented at the clinic on that day. In this process, the patients were given serial numbers as they came to the clinic depending on the order of their arrival. Then, the first subject was selected randomly as follows: the researcher labeled four pieces of folded paper A, B, C, D and randomly

shuffled and reshuffled them in a basket. Then, the researcher invited the first four patients to each pick a piece of folded paper from the basket. Whichever tally number picked A was the first participant for that clinic day. This person was used as a fixed starting point after which other subjects were selected by using a constant interval between the serial numbers taken. Patients aged 18 years and above who met the inclusion criteria were recruited. Patient's cards were tagged to avoid repetition. Any patient who did not provide complete data or refused to continue with the study was replaced immediately by the next patient. As the questionnaire was interviewer-administered and not self-administered, all information was appropriately filled.

Study protocol
Recruitment of participants was carried out each clinic day. A semi-structured study questionnaire was administered to each participant by one of the researchers. All participants had research identification numbers reflected on their questionnaire which corresponded to a code which only the researchers had for easy identification and tracking. The study questionnaire was made of 4 sections namely: Section A: Socio-demographic characteristics; Section B: Modified 4-item Morisky Medication Adherence scale (MMAS);[17-19] Section C: Patient Satisfaction Levels with Services[19,20] and Section D: BP measurement.

The modified 4-item Morisky medication adherence scale
Consists of 4 Yes/No questions (i) Do you sometimes forget to take your pills? (ii) People sometimes miss taking their medications for reasons other than forgetting. Thinking over the past 2 weeks, were there days when you did not take your medicine? (iii) Have you cut back or stopped taking your medicine without telling your doctor because you felt worse when taking it? (iv) When you feel like your symptoms are under control, do you sometimes stop taking your medicines? Adherence was then measured using the MMAS adherence scores interpretation table[19] which assigns a score of 1 for each "yes" question answered: High Adherence (0); Medium Adherence (1–2); Low Adherence (3–4)

Patients' satisfaction levels with services
The dimensions of care that were evaluated included (i) Accessibility to the hospital; (ii) Patient waiting time; (iii) Patient-provider relationship; (iv) Patient-provider communication; (v) Hospital bureaucracy (hospital bureaucracy constitutes processes and procedures involved in accessing care. Hospital bureaucracy involves the day-to-day running of the hospital activities and administrative procedures and the steps taken by the patient before a service can be rendered to them, for example, filling of forms, getting a hospital card, queuing to pay for services, etc.); and (vi) Hospital environment. Each satisfaction item was scored in a 5-point Likert scale ordinal response which was converted to points as follows: excellent – 5 points; very good – 4 points; good – 3 points; fair – 2 points; and poor – 1 point. This gave a total score of 125 points which was then converted to percentage scores with the following operational percentage range

definitions: excellent (90%–100%); very good (70%–89.9%); good (50%–69.9%); fair (30%–49.9%); and poor (0%–29.9%). For the purpose of this study, average score of 50% and above was regarded as "Overall Satisfaction," while "Overall Dissatisfaction" refers to a score <50%.

BP measurement of each participant was measured twice, one before the questionnaire was administered and another after completing the questionnaire. The average BP was then calculated. Onwubere and Kadiri have advocated that BP be measured twice by the same person separated by an interval of at least 2 min.[21] Hypertension was defined as physician office systolic BP level of ≥140 mmHg and diastolic BP of ≥90 mmHg. For the purpose of this study, respondents who have been attending the clinic for a period of at least three months and a minimum of 3 clinic visits with BP of systolic ≥140 mmHg and diastolic ≥90 mmHg will be considered to have uncontrolled BP.

Data analysis
The data were analysed using the SPSS Version 22.0 software for Windows (IBM Corp. Armonk, NY, USA). Qualitative data such as educational status and marital status were presented as figures and percentages, while continuous variables that were normal in distribution (such as age) were expressed as means ± standard deviation. Discrete data such as level of patients' satisfaction was expressed as frequency and percentages. Chi-square statistical test of association were carried out to determine factors influencing patients' satisfaction and the level of statistical significance was set at 95% confidence interval ($P < 0.05$).

Ethical consideration
Ethical approval (FMC/ASB/T/A81/67) for the study was granted by the Ethics and Research Committee of Federal Medical Centre, Asaba. Permission to carry out the study was obtained from the Head of Department, Internal Medicine Department. Written consent was also obtained from the subjects before recruitment into the study

RESULTS
A total of 200 hypertensive respondents were recruited and interviewed. Data collected were analysed and the findings presented below.

Sociodemographic characteristics of respondents
Table 1 shows that the age bracket 40–49 years had the highest proportion of 28% followed by those above 70 years (27.5%) with the age bracket of 30–39 years being the least represented (6.0%). There were no patients within the 18–29 years' age bracket. The mean age of the respondents was 54.1 ± 13.2 years. The respondents were predominantly female 131 (65.5%). Most 80 (40%) of the respondents were secondary school educated and 128 (64%) were married. Almost all (97.5%) of the respondents were Christians and their predominant occupation was being self-employed 83 (41.5%), followed by retired 60 (30.0%) and civil/public servants 41 (20.5%) with majority 148 (74.0%) being of Igbo extraction.

Satisfaction with healthcare services received

Table 2 shows frequency distribution of respondents' satisfaction with health-care services received. These include overall satisfaction with various components of healthcare. Many of the respondents 87 (43.5%) rated overall satisfaction with care received as "Very Good," while 23 (11.5%) rated it as being "Fair." On access to care, a greater proportion of respondents 92 (46.0%) rated it as being "Excellent" and 57 (28.5%) rated it as being "Very Good" while 17 (8.5%) said it was "fair." There were no respondents who considered access to care to be poor. Eighty-two (41.0%) respondents rated patient waiting time "Good," while 13 (6.5%) rated it to be poor. Majority (48.5%) of the respondents rated patient-provider relationship as good while 13.5% rated it to be fair. Furthermore, 55.5% and 47.0% of respondents rated patient-provider communication and hospital environment very good, respectively. While a major proportion 84 (42%) rated hospital bureaucracy as good, 7 (3.5%) rated it poor. The dimension of care respondents was most satisfied with was access to care followed by hospital environment, while they were least satisfied with patient waiting time and hospital bureaucracy.

Level of medication adherence among the respondents

Figure 1 shows the distribution by the level of medication adherence. A total of 92 (46%) of the respondents had medium level of adherence while 76 (38.0%) had high level of medication adherence and 32 (16%) had low level of adherence.

Relationship between medication adherence and blood pressure control

Table 3 shows the relationship between level of medication adherence and BP control. A significant association was demonstrated between level of medication adherence and BP
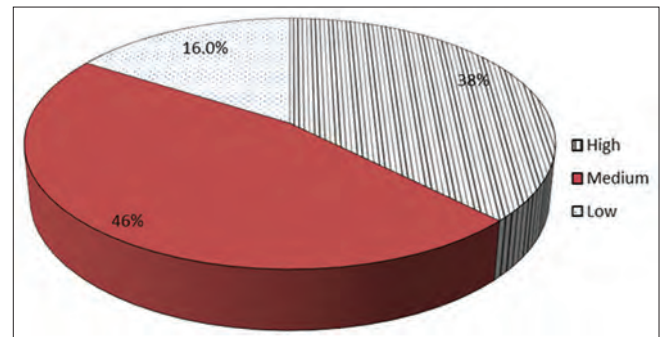
Table 1: Sociodemographic characteristics of respondents (*n*=200)

Characteristic	Frequency (%)
Age (years)	
30-39	12 (6.0)
40-49	56 (28.0)
50-59	26 (13.0)
60-69	51 (25.5)
≥70	55 (27.5)
Gender	
Male	69 (34.5)
Female	131 (65.5)
Occupation	
Self employed	83 (41.5)
Retiree	60 (30.0)
Civil/public servants	41 (20.5)
Unemployed/student	16 (8.0)
Educational status	
No formal education	18 (9.0)
Primary	51 (25.5)
Secondary	80 (40.0)
Tertiary	51 (25.5)
Marital status	
Single	12 (6.0)
Married	128 (64.0)
Separated	49 (24.5)
Divorced	8 (4.0)
Widowed	3 (1.5)
Religion	
Christianity	195 (97.5)
Others	5 (2.5)
Ethnicity	
Igbo	148 (74.0)
Others	19 (9.5)
Urhobo	14 (7.0)
Yoruba	9 (4.5)
Edo	8 (4.0)
Hausa	2 (1.0)

Figure 1: Pie-chart distribution of respondents by the level of medication adherence

Table 2: Distribution of respondents by level of satisfaction among adult hypertensives attending medical outpatient clinic of Federal Medical Centre, Asaba

Domains	Overall levels of satisfaction				
	Poor, *n* (%)	Fair, *n* (%)	Good, *n* (%)	Very good, *n* (%)	Excellent, *n* (%)
Access to care	0	17 (8.5)	34 (17.0)	57 (28.5)	92 (46.0)
Patient waiting time	13 (6.5)	52 (26.0)	82 (41.0)	44 (22.0)	9 (4.5)
Patient-provider relationship	0	27 (13.5)	97 (48.5)	57 (28.5)	19 (9.5)
Patient-provider communication	0	13 (6.5)	59 (29.5)	111 (55.5)	17 (8.5)
Hospital environment	0	6 (3.0)	55 (27.5)	94 (47.0)	45 (22.5)
Hospital bureaucracy	7 (3.5)	41 (20.5)	84 (42.0)	64 (32.0)	4 (2.0)

control as those who have high adherence level were most likely to have their BP under control ($x^2 = 19.14$, $P < 0.001$)

Relationship between level of satisfaction and blood pressure control

Table 4 shows the relationship between level of satisfaction and BP control. Despite the high number of satisfied respondents whose BP was under control (60.5%), there was no statistically significant relationship between level of satisfaction and controlled BP.

Relationship between patient satisfaction and medication adherence

Concerning the relationship between patient satisfaction and medication adherence, there was a significant association between medication adherence and level of overall satisfaction, waiting time, patient-provider relationship and patient-provider communication as shown in Tables 5 and 6. Patients who rated overall satisfaction with care ($x^2 = 26.17$, $P < 0.001$); waiting time ($x^2 = 20.79$, $P < 0.01$); patient-provider relationship ($x^2 = 14.69$, $P < 0.02$) and patient-provider communication ($x^2 = 14.54$, $P < 0.02$) as very good or excellent had the highest proportion of patients with high level of adherence to medication. Majority of the respondents who reported access to care as very good and excellent had high levels of medication adherence (49.1% and 39.1%, respectively), while the majority of those that reported level of satisfaction as fair had the second-highest value for low adherence (23.5%). This relationship however was found not to be statistically significant ($P = 0.05$) As regards the issue of hospital environment, the largest proportion of respondents who scored satisfaction as excellent 20 (44.4%) also had the highest level of medication adherence while the group with the largest proportion of fairly satisfied were found to have 4 (66.7%) and low 2 (33.3%) adherence. The relationship between the two parameters was not statistically significant ($P = 0.23$) Finally on hospital bureaucracy, all the respondents who scored this parameter as excellent also had high level of medication adherence 4 (100%), while the greater proportion of those who found satisfaction to be poor 2 (28.6%) or fair 11 (26.8%) had the lowest level of medication adherence. The relationship between hospital bureaucracy and satisfaction was found not to be statistically significant ($P = 0.05$)

Table 3: Relationship between medication adherence and blood pressure control

	High (n=76), n (%)	Medium (n=92), n (%)	Low (n=32), n (%)	χ^2	P
BP controlled	59 (77.6)	52 (56.5)	11 (34.4)	19.14	<0.001*
BP uncontrolled	17 (22.4)	40 (43.5)	21 (65.6)		

BP: Blood pressure
*Significance is p<0.05

Table 4: Relationship between level of satisfaction and blood pressure control

	Not satisfied (n=23), n (%)	Satisfied (n=177), n (%)	χ^2	P
BP controlled	15 (65.2)	107 (60.5)	0.19	0.66
BP uncontrolled	8 (34.7)	70 (39.3)		

BP: Blood pressure

Table 5: Relationship between overall satisfaction with health and medication adherence among adult hypertensives attending the medical outpatient clinic, Federal Medical Centre, Asaba

Level of satisfaction	Level of adherence			χ^2	P
	High, n (%)	Medium, n (%)	Low, n (%)		
Overall satisfaction					
Fair	8 (34.8)	5 (21.7)	10 (43.5)	26.17	<0.001*
Good	25 (32.1)	45 (57.7)	8 (10.3)		
Very good	35 (40.2)	41 (47.1)	11 (12.6)		
Excellent	8 (66.7)	1 (8.3)	3 (25.0)		

*Significance is p<0.05

DISCUSSION

Majority of the study population in this research were female. This is not in keeping with the known gender distribution of hypertension among the sexes which places men as being more prone to having hypertension than women.[22-24] However, this may be explained as being due to men's poor health-seeking behaviour.[25-27] Studies carried out by Iloh *et al.*[28,29] showed similar higher female preponderance. Poor health-seeking behaviour results in increased disease complications for the individual.

Most of the respondents were in the 40–49 years of age group. There were no patients in the 18–29 years of age group. This is in keeping with the age statistic in the study by Iloh *et al.*[28] This was different from the findings reported by Ekwunife *et al.*[5] which recorded most patients at 20–29 years of age group range followed by those in the age range of 40–49 years. This may be because Ekwunife *et al.*'s study was conducted in Nsukka whose most prominent feature as stated by the study is the University of Nigeria, Nsukka which would contain a high proportion of young people (students). Most of the patients were married and on the average had secondary education. A high proportion of the participants were self-employed which is a reflection of the overall employment situation in the city in which securing work in government/public institutions had dwindled. Many of the respondents rated overall satisfaction with care received as "very good" while 11.5% rated it as being "fair." It is interesting to note that the dimension of care respondents was most satisfied with was access to care followed by hospital environment, while they were least satisfied with patient waiting time and hospital bureaucracy. In other words, they were willing to come to the hospital and receive care, but delays in service were a noticeable discouragement. Improved patient waiting time and bureaucracy could lead to better

Table 6: Relationship between patient satisfaction components and medication adherence among adult hypertensives attending the medical outpatient clinic, Federal Medical Centre, Asaba

Level of satisfaction	Level of adherence			χ^2	P
	High, n (%)	Medium, n (%)	Low, n (%)		
Overall satisfaction					
Fair	8 (34.8)	5 (21.7)	10 (43.5)	26.17	<0.001*
Good	25 (32.1)	45 (57.7)	8 (10.3)		
Very good	35 (40.2)	41 (47.1)	11 (12.6)		
Excellent	8 (66.7)	1 (8.3)	3 (25.0)		
Access to care					
Fair	6 (35.3)	7 (41.2)	4 (23.5)	12.53	0.05
Good	6 (17.6)	18 (52.9)	10 (29.4)		
Very good	28 (49.1)	23 (40.4)	6 (10.5)		
Excellent	36 (39.1)	44 (47.8)	12 (13.0)		
Patient waiting time					
Poor	5 (38.5)	2 (15.4)	6 (46.2)	20.79	<0.01*
Fair	18 (34.6)	25 (48.1)	9 (17.3)		
Good	26 (31.7)	46 (56.1)	10 (12.2)		
Very good	23 (52.3)	17 (38.6)	4 (9.1)		
Excellent	4 (44.5)	2 (22.2)	3 (33.3)		
Patient-provider relationship					
Fair	8 (29.6)	11 (40.7)	8 (29.6)	14.69	0.02*
Good	32 (33.0)	53 (54.6)	12 (12.4)		
Very good	28 (49.1)	23 (40.4)	6 (10.5)		
Excellent	8 (42.1)	5 (26.3)	6 (31.6)		
Patient-provider communication					
Fair	4 (30.7)	3 (23.1)	6 (46.2)	14.54	0.02*
Good	18 (30.5)	33 (55.9)	8 (13.6)		
Very good	46 (41.4)	51 (45.9)	14 (12.6)		
Excellent	8 (47.1)	5 (29.4)	4 (23.5)		
Hospital environment					
Fair	0	4 (66.7)	2 (33.3)	6.16	0.23
Good	22 (40.0)	21 (38.2)	12 (21.8)		
Very good	34 (36.2)	46 (48.9)	14 (14.9)		
Excellent	20 (44.4)	21 (46.7)	4 (8.9)		
Hospital bureaucracy					
Poor	3 (42.9)	2 (28.6)	2 (28.6)	15.54	0.05
Fair	13 (31.7)	17 (41.5)	11 (26.8)		
Good	27 (32.1)	46 (54.8)	11 (13.1)		
Very good	29 (45.3)	27 (42.2)	8 (12.5)		
Excellent	4 (100.0)	0	0		

*Significance is p<0.05

patient satisfaction and thus better adherence to doctor's advice and adherence. The level of drug treatment adherence among the study population was noted as 38% of patients having high levels of medication adherence, 46% having moderate levels of medication adherence, while 16% had low levels of medication adherence. Morisky *et al.* in a study on "Predictive Validity of a Medication Adherence Measure in an Outpatient Setting" had adherence figures 15.9% for high adherence, 52.0% for medium adherence, and 32.1% for low adherence.[30] The findings in this study are less than the adherence of 42.9% recorded in Umuahia, Eastern Nigeria[28] and 61.2% recorded in Ekiti, South Western Nigeria.[31] A study done by Ramli *et al.*[32] in Malaysia, 53.4% rated adherence as good and another one done by Turki and Sulaiman[33] in the same country 48.7% of the respondents had good adherence. There was a significant association between patient waiting time, patient provider relationship and patient provider communication. Hence, it stands to reason that human interaction is very important when it comes to medication adherence.

This study demonstrated a significant association between the level of medication adherence and BP control as those who had high adherence level were most likely to have their BP under control ($x^2 = 19.14$, $P < 0.001$). On the relationship between the level of satisfaction and BP, despite there being a large proportion of satisfied patients who had their BP under control, Chi-square test done showed no significant association between both entities with *P* value being 0.66 There was a statistically significant relationship between overall satisfaction and medication adherence ($x^2 = 26.17$, $P < 0.001$). This was in keeping with findings by Abioye-Kuteyi *et al.*[34] in which it was shown that satisfied patients had the highest mean score for adherence intent while dissatisfied patients had the lowest scores. The finding of a significant relationship between patient satisfaction and medication adherence in this study tallies with similar findings with studies by Morisky *et al.*[30] and Iloh *et al.*[28] In other words, the more satisfied patients were, the more likely they would adhere to prescribed drugs. Interestingly, it was also observed that the largest proportion of patients who had high level of adherence were those who rated patient waiting time, patient-provider relationship and patient-provider communication as "very good." Therefore this study has shown that a positive significant relationship exists between patient satisfaction and medication adherence. It is pertinent to note that there may be other factors among the study population that may contribute to poor adherence such as forgetfulness, multiple drug use, cost of medication, and wrong health beliefs about hypertension as a disease entity.

CONCLUSION

Overall patient satisfaction was discovered to be significantly associated with medication adherence. There was a statistically significant association between medication adherence and BP control. There was also a statistically significant association between medication adherence and the patient satisfaction components of patient waiting time, patient-provider relationship, and patient-provider communication. It is advocated that steps towards improvement of satisfaction among patients in the hospital should be made as this has been found to lead to increase patient adherence to medication thereby achieving better BP control.

Limitation

(i) This is a cross-sectional study, thus causality cannot be determined. (ii) Participants' response may not be representative of the actual situation (iii) Recall bias. (iv) The duration of being hypertensive and the number of medication being used were not determined as these could have an effect on BP control and adherence.

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Conflicts of interest

There are no conflicts of interest.

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