

PSYCHOSOCIAL FACTORS AS CORRELATES OF NON-COMPLIANCE WITH MEDICATION AMONG HYPERTENSIVE PATIENTS IN LAGOS, NIGERIA

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Absract

The study investigated psychosocial factors influencing noncompliance with hypertensive medication use. Hypertension is one of the gravest cardiovascular risk factors but its control is still a challenge around the world. Control of blood pressure can reduce cardiovascular morbidity and mortality, so compliance to antihypertensive drugs and life style modification plays an important role in the control of hypertension. Hypertension is defined as an average systolic blood pressure 140mm Hg or greater and diastolic blood pressure 90mm Hg or greater. The study adopted a descriptive research design. One hundred and fifty (150) respondents were sampled for the study. Responses were gathered using questionnaire tagged (PFINCM) with a reliability coefficient of $r = 86$. Frequency count and percentages were used to analyze the demographic characteristics while Pearson Product Moment Correlation was used to analyze the three hypotheses generated for the study at 0.05 level of significance. The result showed that there is a significant relationship between psychological factors and non-compliance with hypertensive drug ($r = .550$, $N = 150$, $P < .01$); there is a positive significant relationship between social factors and noncompliance with hypertensive drug ($r = .497$, $N = 150$, $P < .01$); there is a positive significant relationship between health well-being and noncompliance with hypertensive drug ($r = .295$, $N = 150$, $P < .01$). The study established joint effect of the independent variables on non-compliance with hypertensive drugs. It was concluded that psychosocial factors greatly influence non-compliance with hypertensive drugs among patient generally. Based on this, it was recommended that social workers and other stake holders in health care practice should encourage their clients to adhere strictly to prescribed drugs.

Key Words: Hypertension, Non-compliance, Cardiovascular diseases, Drug use and Health Social Workers

Introduction

Hypertension is an important worldwide public-health challenge because of its high frequency and risks factor for cerebrovascular, cardiovascular and kidney disease. The World Health Organization (2006) has estimated that about 62% of cerebrovascular disease and 49% of ischemic heart disease burden worldwide are attributable to suboptimal blood pressure levels whereby high blood pressure is estimated to cause 7.1 million deaths annually, accounting for 13% of all deaths globally. Kearney, Whelton and Reynolds (2005) projected that the number of adults with hypertension will increase by 60% to a total of 1.56 billion (1.54 billion–1.58 billion) in 2025. Most of this rise can be attributed to an expected increase in the number of people with hypertension in economically developing regions, whereby between the year 2000 and 2025, the worldwide prevalence of hypertension was predicted to increase by 9% in men and 13% in women because of the projected changes in the age distribution of the population. Specifically, a larger proportion of the world population is expected to be older by 2025. Nigeria is experiencing urbanization and modernization which cause changes in diet and physical activity particularly in the cities.

Bovet, Mkamba and Balampama (2008) asserted that like many other developing countries, as a result of increased longevity and improvement in the standard of living as well as the influence of the western lifestyle such as cigarette smoking and alcohol consumption, hypertension has assumed a major public health dilemma. Risk factors for hypertension such as a sedentary lifestyle, obesity, consumption of fatty foods and resultant dyslipidemia are

highly prevalent in the population and these factors contribute to the epidemic. Prevalence of hypertension across the world indicates progressive increment. The rate is higher in western world and with a consistent gradient of hypertension prevalence rising from 16% in West Africa to 26% in the Caribbean and 33% in the United States. In 2003, a prevalence rate of 28.3% (crude) and 27.3% (age-standardized) was reported. In Nigeria, the age-adjusted prevalence of hypertension was reported to be 14.5%. Pauline and Bernard (2011) confirmed that a crude prevalence of 21% (23.3% in males and 16.4% in females) and 22% were reported in south western Nigeria. Also in South Eastern part of Nigeria, 21% was reported and in Southern Nigeria, a prevalence rate of 16% and 12 %. Maletnlema (2002) reported that hypertension prevalence was 30% in men and 28.6% in women in Ilala and according to Kamuhabwa & Lugina (2010), 51% and 42% in men and women respectively suffer from hypertension in Temeke.

Kumar and Halesh (2010) also affirmed that uncontrolled hypertension is caused by non-adherence to the antihypertensive drugs. Patients' understanding of their drug regimens helps to improve their adherence. Thus, this will help prevent the complications of hypertension which are debilitating and if not prevented can increase the burden of a disease that is already on the increase. Non-adherence to prescribed drugs schedule has been a major problem the world over. Studies on this subject show that adherence is about 50% for medications in chronic diseases including hypertension and much lower for lifestyle prescriptions. WHO (2003) confirmed that poor adherence to long-term therapies severely compromises the effectiveness of treatment, making this a

critical issue in population health both from the perspective of quality of life and of health economics. Interventions aimed at improving adherence would provide a significant positive return on investment through primary prevention of risk factors and secondary prevention of adverse health outcomes.

Law, Waki and Morison (2003) affirmed that hypertension is an abnormally high blood pressure; it means tension in the arteries that carries blood from the heart to all parts of the body. Hypertension does not mean the same as emotional tension but emotional tension and stress can temporarily increase blood pressure. Blood pressure is said to be normal when it is recorded as 120/80 millimeter of mercury (mmHg). A record of 140/90 is called pre-hypertension and a measurement above this is considered to be high blood pressure. An elevation of the systolic and or diastolic blood pressure increases the risk of developing heart (cardiac) disease, kidney disease, hardening of the arteries (arteriosclerosis), eye or brain damage. These are called complications of hypertension and are often referred to as end organ damage because the damage of these organs is the end result of chronic high blood pressure. For this singular reason, the diagnosis of high blood pressure is important so that efforts can be made to normalize blood pressure and prevent complications. It has been documented in literature and hospital records that people slumped and died as a result of untreated and uncontrolled hypertension. Also, some complications of non-compliance with hypertensive medications have been established in clinical settings. It is on this premise that there is the need to find out the root cause of non-compliance with hypertensive medication among patients in Nigeria, using Lagos state as a case study.

Causes of Hypertension

The cause of essential hypertension that accounts for 95% of cases is multifactorial; meaning that there are several factors whose combined effects, produce hypertension. Secondary hypertension which accounts for the rest 5% is as a result of a specific abnormality in one of the organs or systems of the body. Hitt (2010) warned that salt intake above 5.8 grams daily may be a particular factor in relation to essential hypertension in several situations and excess of salt may be involved in the hypertension that is associated with advancing age, African-American background, obesity, heredity, susceptibility and kidney failure. The institute of medicine of the National Academies recommends that 19 to 50 year old adults should consume only 3.8 grams of salt to replace the average amount lost daily through perspiration.

Greeff (2006) asserted that genetic factors account for about 30% of essential hypertension. Genetics plays a prominent role in the development of hypertension. For example, individuals who have either of the parents with hypertension is as twice likely to be hypertensive. Rarely, certain unusual genetic disorders affecting the hormones of the adrenal glands may lead to hypertension. Symptoms of high blood pressure may not be evident until the pressure becomes complicated. This may account for the label "Silent killer" ascribed to hypertension. It is called silent killer because the disease can progress to finally develop any or more of the several potentially fatal complications of hypertension such as heart attacks or strokes. WHO (2011) observed that about one out of 100 people with hypertension is diagnosed with severe blood pressure at their first visit to the doctor. In most of these patients, the diastolic blood pressure exceeds 140mmHg

accompanied with severe headache, nausea, visual symptoms, dizziness and sometimes kidney failure. Malignant hypertension is a medical emergency and requires urgent treatment to prevent a stroke.

It is important to note that there is an association between type of job and blood pressure. Jing, Grant, Vernon and Shu (2008) reported that apart from the type of work, some particular job types have been shown to be positively correlated with unhealthy blood pressure changes. Jobs that are sedentary may involve mental or physical stress which can be a major risk factor for the development of high blood pressure. Garfield and Caro (2000) claimed that lifestyle modifications can lower blood pressure as well as improve a patient's response to blood pressure medications. A lifestyle modification refers to certain specific recommendations for changes in habits, diet and exercise. Alcoholism, cigarette smoking, coffee and caffeinated beverages are major lifestyle habits. People who drink alcohol excessively (over two drinks per day) have a one and a half to two times increase in the prevalence of hypertension. WHO (2003) asserted that the association between alcohol and high blood pressure is particularly noticeable when alcohol intake exceeds five drinks per day. In other words, the more alcohol consumed, the stronger is the link with hypertension. In the same vein, cigarette smoking can repeatedly produce an immediate, temporary rise in blood pressure of 5 to 10mmHg. Carpenter (2005) documented that consumption of sugar or diet cola did cause modest increase in blood pressure. It has also been documented that energy drinks often contain high levels of caffeine, and, thus suggested that people with high blood pressure or heart diseases should avoid energy drinks because they could affect their

blood pressure. WHO (2006) earlier documented that hypertension is responsible for 7.1 million of global preventable premature death. The global prevalence was estimated to be 26.6% in men and 26.1% in women. Hypertension is said to have affected over 20 million people in sub Saharan Africa and its prevalence has been reported to be on the increase in recent years. Also in Nigeria, Godfrey and Sarah (2010) asserted that hypertension is said to be the most common non-communicable disease with over 4.3 million Nigerians above the age of 15 years classified as being hypertensive.

Premised on the foregoing, hypertension victims can develop complications involving the cardiovascular, cerebrovascular, renal, and the ocular systems. Sustained elevation of high blood pressure results in an overburdened heart. First, to face the burden is the myocardial fibres of the left ventricle which become hypertrophied. Over 30% of patients with sustained elevation of blood pressure have left ventricular hypertrophy. This complication can lead to heart failure. Furthermore, hypertension promotes the development of atherosclerosis in the coronary artery supplying the heart. A narrowing or complete occlusion leads to myocardial ischemia or infarction and sometimes death. Bahir, Saleem, Hassali, Shafie, and Awad (2011) concluded that hypertension leads to renal damage by promoting obstructive atherosclerotic plaques in the arteries supplying the kidneys. The vascular damage results in progressive deterioration of renal function and eventually renal failure. In the same vein, hypertension promotes the development of atherosclerotic plaques in the cerebral vasculature. Narrowing or complete vascular occlusion of such vessels produces ischemic stroke.

Furthermore, hypertension aids the development of aneurysms, the rupture of which results in haemorrhagic stroke. Another devastating effect of uncontrolled hypertension is that it damages the tiny ocular vascular supply resulting in retinopathy, which may lead to blindness.

Epidemiology of hypertension

Under a threshold of 140/90 mmHg, the World Health Organization (2006) estimates that nearly 1 billion people in developed and developing countries are affected by hypertension. About 1 in 8 deaths worldwide is due to hypertension and 4 million people die annually; thus making it the third largest killer in the world. The seriousness of hypertension as a global public health problem is evident by its high prevalence and associated increase in cardiovascular complications in virtually all countries of the world. According to Khatib (2004), all hypertensive persons stand the risk of developing cerebrovascular disease. It is continuous, consistent and independent of other risk factors. Thus, the higher the blood pressure, the higher is the risk of developing complications. Furthermore, for hypertensive persons aged 40-70 years, an increase in systolic blood pressure by 20mmHg and diastolic blood pressure by 10mmHg, doubles the risk of developing cardiovascular complications.

Mengden, Vetter, Tousset and Uen (2006) observed that the emergence of advanced medical technologies have contributed to a significant drop in mortality

due to hypertension complications in developed countries; although the prevalence in these countries remains significantly high. However, hypertension is, especially, prevalent in developing countries which currently account for 70% of hypertension and cardiovascular related deaths. The upsurge in hypertension is largely due in part to the phenomenon of epidemiological transition, occurring vis-à-vis changes in dietary habits, urbanisation and westernisation. Large-scale migration of people from rural to urban areas in search of greener pastures and consequent stress and lifestyle changes contribute significantly to increased prevalence of hypertension in developing countries.

In Sub-Saharan Africa, hypertension is more prevalent in urban than rural areas in all countries of the region. Contrary to widely held conception, hypertension is a major public health problem in Sub-Saharan Africa but unfortunately, most countries of the region lack the resources to detect, prevent and treat the disease. WHO (2011) suggested that strategies to control hypertension and cardiovascular risk factors in the population should include health education campaigns through the mass media and in schools. Hypertension screening in workplaces should also be promoted as well as the formation of heart health clubs in schools and clinics.

Classification of hypertension

Table 1: Classification of blood pressure

Blood pressure classification	Systolic blood pressure (mmHg)	Diastolic blood pressure (mmHg)
Normal	<120	and <80
Pre-hypertension	120-139	or 80-89
Stage I hypertension	140-159	or 90-99
Stage II hypertension	>160	or > 100

Source: Chobanian et al 2003)

Table: 1 indicates that blood pressure is classified into 4 categories. A normotensive patient is one with systolic and diastolic blood pressures less than 120 mmHg and 80 mmHg respectively. Those with a systolic blood pressure of 120-139 or a diastolic blood pressure of 80-89 are regarded as pre-hypertensive, and may develop the disease as a result of advancing age or lifestyle related factors. Pre-hypertensive persons are "individuals in whom early intervention by adoption of healthy lifestyles can reduce blood pressure, decrease the rate of progression of blood pressure to hypertensive levels with age, or prevent hypertension entirely. Therefore, pre-hypertensive persons require basic lifestyle modifications to stay healthy. Stage I hypertensive persons are patients with a systolic blood pressure ranging from 140-159 and a diastolic blood pressure of 90-99 respectively. Stage II hypertensive persons are patients with a systolic blood pressure of 160mmHg and above and a diastolic blood pressure of 100mmHg and above. Patients who have stage I and II hypertension require pharmacological treatment and need to modify their lifestyle.

Factors affecting non-compliance with antihypertensive medication

Compliance can be defined as patient's behaviours in terms of taking

medication, following diets, or executing life style changes which coincide with healthcare providers' recommendations for health and medical advice whereby to achieve effective treatment and realize the benefits of treatment strict adherence to treatment instructions are very critical. WHO (2003) observed that sticking to the treatment instructions for a long term illness poses a great challenge to the patients and to the larger society. Compliance with drug treatment is a cost saving measure since it decreases the incidence of complications and the need for additional medications. However, non-compliance with prescribed antihypertensive medication is an important contributor to the failure of antihypertensive therapy. Factors affecting compliance to antihypertensive therapy include forgetfulness, deliberately missing doses, due to side effects, increased number of tablets, not properly counselled, and due to cost issues. Also, factors can be grouped into several categories, namely, patient-centered factors, for example age, ethnicity, gender, education, and marital status, therapy-related factors, healthcare system factors, social and economic factors.

Effects of non-compliance with hypertensive medication

Complying with daily medication taking, smoking cessation, and dietary and

alcohol restrictions require a change in behaviour which may be extremely difficult. Patients often do not comply with their treatment in spite of professional advice even when negating such advice is at their own risk. Introducing individual behavioral change is often met with some difficulty and skepticism which are attributable to personal characteristics such as beliefs, attitudes, knowledge and motivation regarding the behavior. In support of this, Kim, Hill, Bone and Levine (2000) reported that non-compliance with anti-hypertensive treatment has grave implications for the individual and the society. The consequences of non-compliance with anti-hypertensive medications are threefold; first, it leads to resistant or uncontrolled hypertension; second, it leads to unnecessary hospitalisations and increased workload for health workers and lastly, it results in wastage of resources.

At the individual level, non-compliance leads to resistant or uncontrolled hypertension, which when not detected results in the development of complications such as congestive heart failure, coronary heart disease, renal failure and cerebrovascular accidents. Mazzaglia, Ambrosion and Alacqua(2009) affirmed that apart from jeopardising the health and well-being of the patient, these complications also lead to premature deaths or the victim may survive with lifelong disabilities resulting in a life of dependence on others. The absolute effects of the complications of hypertension on individuals are enormous and may be difficult to quantify, particularly, the physical and psychological suffering inflicted on the victim and the immediate family.

Methodology

The descriptive survey design was adopted for this study. The target population consisted of all adult hypertensive patients residing in Orile Agege Local Government Area and Ikeja Local Government of Lagos State. The accessible population consisted of all persons who suffered from hypertension and are receiving treatment at the Orile Agege General Hospital, Oke-Odo and LASUTH, Ikeja, Lagos State. All patients attending hypertension clinics from Tuesday to Friday in the selected hospitals were included in the sampling list for the study. Purposive sampling method was used to select participants for the study. The questionnaire was self-structured and divided into three sections. Section A dealt with the socio-demographic characteristic of the hypertensive patient while Section B contains items measuring the health of hypertensive patient in compliance with medication regimen and lifestyle. The questionnaire was pre-tested using 20 hypertensive patients at Orile Agege General Hospital who are not part of the research population with a reliability of $r=0.86$. Data were obtained by distributing the questionnaire to 150 respondents from selected Hospitals in Lagos State. Data collected were analyzed by using descriptive statistic method. Frequency count and percentages were used for demographic characteristics while Pearson moment correlation was used to test hypotheses 1-3. However, ANOVA statistical tool was used to find out the joint effects of the independent variables on non-compliance with hypertensive drugs. Hypotheses were tested at 0.05 level of significance.

Results

Demographical variables

Table 2: Distribution of respondents by Age group

Age group	Frequency	Percentage
30-35 years	17	11.3
36-40 years	11	7.3
41-45 years	33	22.0
Above 46 years	89	59.3
Total	150	100.0
Sex		
Male	75	50.0
Female	75	50.0
Total	150	100.0
Marital status		
Single	16	10.7
Married	106	70.7
Divorced	16	10.7
Separated	12	8.0
Total	150	100.0
Educational status		
Primary	23	15.3
Secondary	26	17.3
ND/HND	20	13.3
Degree	57	38.0
Others	24	16.0
Total	150	100.0
Occupation		
Civil servant	53	35.3
Self employed	64	42.7
Retiree	27	18.0
Unemployed	6	4.0
Total	150	100.0
Religion		
Christianity	99	66.0
Islam	44	29.3
Traditional	7	4.7
Total	150	100.0

Table 2 shows that 17(11.3%) respondents were within 30-35 years, 11(7.3%) were within 36-40 years, 33(22.0%) were within 41-45 years while 89(59.3%) were above 46 years. 75(50.0%) respondents were male and female respondents. 16(10.7%) respondents were single, 106(70.7%) were married, 16(10.7%) were divorced while 12(8.0%) were separated. 23(15.3%) respondents had

Primary School Leaving Certificate, 26(17.3%) had Secondary School Leaving Certificate, 20(13.3%) had ND/HND certificate, 57(38.0%) had Degree certificate while 24(16.0%) had other educational qualification respectively. 53(35.3%) respondents were civil servant, 64(42.7%) were self-employed, 27(18.0%) were retirees while 6(4.0%) were unemployed. 99(66.0%)

respondents were christians, 44(29.3%) were muslims while 7(4.7%) were traditional worshippers.

Discussion of findings

Ho 1: There is no significant relationship between Psychological factors and Non-compliance with Hypertensive drug

Table 3: Correlation between Psychological factors and non-compliance with drug use.

Variable	Mean	Std. Dev.	N	R	P	Remark
Non-compliance with Hypertensive drug	23.0400	3.6359	150	.550**	.000	Sig.
Psychological factors	17.2667	4.0528				

** Sig. at .05 level

The above table shows that there is a positive significant relationship between Psychological factors and Non-compliance with Hypertensive drug ($r = .550$, $N = 150$, $P < .01$). Hence, Psychological factors had influenced Non-compliance with medication use among hypertensive patients in Government Hospitals, Lagos state. In the study, Null hypothesis is rejected.

Ho 2: There is no significant relationship between social factors and non-compliance with Hypertensive drug

Table 4: Correlation between social factors and non-compliance with drug.

Variable	Mean	Std. Dev.	N	R	P	Remark
Non-compliance with Hypertensive drug	23.0400	3.6359	150	.497**	.000	Sig.
Social factors	14.3867	5.0178				

** Sig. at .05 level

The above table shows that there is a positive significant relationship between social factors and non-compliance with hypertensive drug ($r = .497$, $N = 150$, $P < .01$). Hence, social factors had influenced non-compliance with medication use among hypertensive patients in Government

Hospitals, Lagos state in the study. Null hypothesis is therefore rejected.

Ho 3: There is no significant relationship between health well-being and non-compliance with hypertensive drug.

Table 5: The Correlation between non-compliance with drug use and health well-being

Variable	Mean	Std. Dev.	N	R	P	Remark
Non-compliance with Hypertensive drug	23.0400	3.6359	150	.295**	.000	Sig.
Health well-being	16.4867	3.0493				

** Sig. at .05 level

The above table shows that there is a positive significant relationship between health well-being and non-compliance with hypertensive drug ($r = .295$, $N = 150$, $P < .01$). Hence, health well-being had influenced non-compliance with medication use among hypertensive patients in Government Hospitals, Lagos state in the study. Null hypothesis is rejected.

Discussion of Findings

The result shows that there is a significant relationship between psychological factors and non-compliance with hypertensive drugs among patients. This is in line with Cambell and Katezorowski (2006) who found out that adopting lifestyle modifications or non-compliance with prescribed medications is greatly associated with uncontrolled hypertension as well as the risks of developing complications, whereas, compliance with hypertensive drug therapy has been shown to reduce the risk of stroke and coronary heart diseases by an estimate of 34% and 21% respectively. The result also supports Berner (2002) who also found out that several studies have shown that patients with chronic conditions such as hypertension adhere only to 50-60 % percent of medications as prescribed. Since hypertension has no cure, patients are expected to take or adhere to prescribed medications for or throughout life span. Compliance to drug demands that patients must use their drugs judiciously and refill when medications are exhausted. The result also supports Fodor, Kotreec, Bacska, Dorner, Lietava and Sonkodi (2005) who asserted that non-compliance with prescribed hypertensive medication is an important contributor to the failure of hypertensive therapy. Premised on this result, hypertensive patients should adhere strictly

to prescribed drugs to enhance longevity. Social workers and other health workers should also ensure strict adherence to medication, not only by hypertensive patients but by all clients they might come in contact with during the course of their helping practice.

In the same vein, the study revealed that there is a significant relationship between social factors and non-compliance with hypertensive drugs. This is in line with Wagner, Justice, Chesney, Sinclair, Weissman and Rodriguez-Barradas (2001) who earlier found out that psychosocial factors such as depression and level of social support influence compliance behaviour. It is noteworthy that depressed patients may lose interest in life itself and the appetite for food or medicine would consequently be suppressed. Also, social support such as financial or logistical support would be expected to enhance compliance particularly in elderly and invalid patients. Research reports and findings also support that factors such as socio-demographics, health care related factors, self-efficacy and cues to action also influence compliance behaviour. The result is also in line with Bovet, Gervasoni, Mkamba and Balommpama (2008) who found out that compliance was relatively high in patients with skilled occupations, those who were health conscious and those who are healthy. Premised on this, it could be deduced that, social factors, (occupation, health and economic status) enhance compliance with hypertensive drugs. World Health Organisation (2003) also confirmed that compliance with drug treatment to the larger society is a cost saving measure since it decreases the incidence of complications and the need for additional medications.

The result shows that there is

significant relationship between health well-being and non-compliance with hypertensive drugs. It is in line with Mengden, Vetter, Tousset and Uen (2006) who found out that non-compliance with drug leads to resistance or uncontrolled hypertension which when not detected results in the development of complications such as congestive heart failure, coronary heart diseases, renal failure and cerebrovascular accidents. Kim, Hill and Bone (2000) earlier found out that apart from jeopardizing the health and well-being of the patient, these complications also lead to premature deaths or the victims may survive with lifelong disabilities resulting in a life of dependence on others. It is noteworthy also that the absolute effects of the complications of hypertension on individuals are enormous and may be difficult to quantify, particularly, the physical and psychological suffering inflicted on the victim and the immediate family. Patients' orientation must change. The social worker should encourage and educate hypertensive patients to comply with drug regimen to avoid complications and/or sudden death.

Conclusion

The study concluded that psychosocial factors greatly influence noncompliance with hypertensive drugs among patients generally. The hypotheses tested revealed that psychosocial factors greatly influence the choice of drugs and noncompliance with hypertensive drugs. It was also concluded that social factors had influenced non-compliance with medication use among hypertensive patients. In this same trend, a conclusion was drawn that health well-being had influenced non-compliance with medication use among hypertensive patients. The consequences of non-compliance with anti-hypertensive medications are in threefold; first, it leads to

resistant or uncontrolled hypertension; second, it leads to unnecessary hospitalisations and increased workload for health workers and lastly, it results in wastage of resources. The study finally established that compliance to drug demands that patients must use their drugs judiciously and refill when medications are exhausted.

Recommendations

1. Patients need advice, support and information from health professionals in order to be able to understand the importance of using drugs as prescribed. It is recommended that hypertensive patients should be counselled every time whenever they visit physicians to improve the compliance to anti-hypertensive drugs, salt restriction and to do exercise daily, so that they could have better control of hypertension.
2. Social workers should educate hypertensive patients about their disease, the importance of complying with hypertensive medications and the consequences of non-compliance with treatment. Patients should be told that the drugs are for long term use (for life) and the disadvantage of skipping the dose. Patients should know the importance of complying with medication whether they have symptoms or not. Social workers should also stress the importance of the removal of the barriers of using antihypertensive drugs.
3. Ministry of health and social welfare should plan strategies to improve antihypertensive compliance such as improving Health Education campaign on the importance of compliance to antihypertensive medications through the media, posters, and religion centers such as churches and mosques.

4. The family members should be readily available to give social support at all times.

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