

INFLUENCE OF DEMOGRAPHIC FACTORS ON THE PERCEIVED CAUSES AND PREVENTION OF HYPERTENSION AMONG PATIENTS IN UNIVERSITY OF ILORIN TEACHING HOSPITAL, ILORIN.

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Abstract

The study was conducted to determine the influence of demographic factors of hypertensive patients towards the perceived causes and prevention of hypertension in University of Ilorin Teaching Hospital, Ilorin. The population comprised of hypertensive clients attending the outpatient clinic for follow-up. Purposive random sampling technique was used to select three hundred (300) subjects for the study. Questionnaire was the main instrument used for data collection and was drawn in line with the likert rating scale of strongly agree, agree, disagree and strongly disagree format. This was personally administered with the help of four staff who served as Research Assistants. The chi square inferential statistics was used to test the hypotheses at 0.05 level of significance. The result revealed that age, gender and occupation had influence on the patients towards the causes and prevention of hypertension. Based on the findings, the authors recommend that unhealthy lifestyle among the youths especially the adolescents and young adults should be discouraged through the Ministry of Health, Youths and Social Welfare. Efforts should be made to stop the rising tide of the disease in the country. Also the three tiers, of health sectors (primary, secondary and tertiary) should be adequately and actively involved in the fight against the disease so as to reduce the prevalence globally.

Keywords: Influence, Demographic Factors, Causes, Prevention and Hypertension

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Introduction

Hypertension (HBP) has become a household name, it is so common that hardly any day goes without a mention of it anywhere, and many times. New patients are being diagnosed everyday, some come into the hospital with the attendant complications such as heart failure or stroke. People regard hypertension as a normal phenomenon in the community and treat it just like the common cold, disregarding its serious health implications.

Richard (2006) stated that HBP is a reading of 140/90mmHg on three consecutive measurements at least six hours interval. This definition he said, varies for pregnant women which is 140/90mmHg on two consecutive readings six hours interval. Consistently high blood pressure causes the heart to work harder than it should and can damage the coronary arteries, the brain kidneys and the eyes.

Friedwald (2008) opined that HBP is a very dangerous disease and called it a silent killer. Initially, it is symptom free. Those who have complaints are those who come in with the complications which most often than not, come in when it is too late to save their lives. The disease affects more than 50 million Americans, one in every four adults and one in every three African Americans. It costs more than \$37 billion per year in health care (Friedwald, 2008).

Hypertension is a common chronic disorder, a complex health problem and a major challenge in primary health care system. Hypertension is usually an insidious condition with no specific perceptible symptoms in the early stage, yet it is the most prevalent cause of cerebrovascular accidents and congestive heart failure. It is frequently complicated by coronary artery disease and renal failure. It can be projected that over 35% of Nigerian adults are hypertensive and it is more prevalent among business people (World Health Organization, 2000). Hypertension can also be an acute disorder when it occurs in pregnancy especially in the 3rd trimester of pregnancy. Blood pressure varies with the time of the day and the home may assist in the diagnosis of high or low BP. Home monitoring can assist in diagnosing 'white coat' hypertension. This means that BP sometimes goes up while in the doctor's office. Home monitoring will help to measure the true HBP and provide the doctor with a log of HBP measurement over time. This helps to diagnose and prevent potential health problems (WHO, 2010).

Bovet (2007) posited that hypertension has become a significant problem in many developing countries experiencing epidemiological transition from communicable to non-communicable diseases. Its emergence is a public health problem which is strongly related to aging of the population, urbanisation and socio economic changes favouring sedentary habits, obesity, alcohol consumption and salt intake among others. Hypertension causes no symptoms to motivate a person to seek medical attention. When symptoms occur they signify either secondary causes or consequences of sustained elevation of blood pressure on target organs (Bassavanthappa 2005).

In the light of the foregoing, it can be deduced that hypertension presents a major area of intervention because it is a common condition and it is amenable to control through non-pharmacological lifestyle factors and pharmacological treatment. If these measures are adhered to, the morbidity and mortality will be greatly reduced hence prolonging and increasing the quality of life. Ayodele, Alebiosu, Salako, Awodein and Adigun (2005) reported that systemic hypertension is the commonest non communicable disease in Nigeria and that the brunt of the damage is borne by heart, brain, kidneys and blood vessels. The involvement of these organs is associated with increased morbidity and mortality.

Wahab, Ojini, Sanya, Olookoba, Katibi and Omotosho (2007) affirmed that stroke is a leading cause of mortality and long-term disability worldwide. One out of every six survivors remained permanently disabled. Four organs which are the most frequent target for damage are the heart kidney, brain and the eyes. Hypertension is a global public health problem and particularly in Sub-Saharan Africa, where it is increasing in importance as a major cause of cardiovascular disability and mortality.

The demographic variables which were considered in this study are, age, gender, occupation and level of education. The study considered the influence of these variables on the cause and prevention of hypertension in University of Ilorin Teaching Hospital, Ilorin. Salako (2005) affirmed that HBP has become a public health problem worldwide and particularly in Sub-Saharan Africa, where it is increasing in importance as a major cause of cardiovascular disability and mortality. Its consequences on target organs are more severe in sub-Saharan Africa than in whites. Community surveys in industrialised nations have shown that HBP has prevalence of 15% -30%

which is now a leading cause of morbidity and mortality from coronary artery disease and stroke (Al-Sovielem & Elzubeir, 1998)

William (1999) based a classification of HBP on the severity. He said the patient need to be clinically examined adequately for the purpose of referral. The classification could be borderline HBP, Mild, Moderate, Severe and Malignant hypertension. WHO (2003) used this classification and based it on age which they use as a deciding factor. A normotensive individual, is aged between seventeen and forty years and has a HBP of less than 140/90mmHg but a reading between 140/90mmHg and 160/95mmHg in persons below 30 years is referred to as borderline hypertension. A HBP person has a blood pressure above 160/100mmHg at age seventeen to sixty years and 175/100mmHg at over 60 years of age.

Kearney, Whelton, Reynolds, Munter and Whelton (2005) affirmed that nearly one billion people are affected by hypertension worldwide and this figure is predicted to increase to 1.5 billion by 2025. WHO. (2003) indicated that 90-95% of adult have essential HBP, forty three million people in the United States have HBP and are taking antihypertensive medication, which is almost 24% of adult population. The proportion changes with race, higher in black Mexicans than in white. It also changes with age, for instance, in industrialised countries, systolic HBP rises until age 55-60 years (WHO, 2003). With respect to gender, HBP is more prevalent in men (menopause tend to abolish the difference). While, socio-economic status tends to influence HBP as it indicates the type of lifestyle lived and it is inversely related to the prevalence of morbidity and mortality rates related to hypertension (WHO, 2003).

Miller-Kaene (2003) said hypertension is a major threat to life and health and estimated that one in four American has high blood pressure and that it primarily affects men over 35 years and women over 45 years of age. Studies have shown that it is not limited to older persons; the disease is now increasingly being detected in teenagers. Between 2 and 6% adolescents have HBP and the prevalence rate in pre pubertal children is now reported (Miller-Kaene, 2003). These they found out is due to the changing lifestyle of the youths as food fads is rampant among them, also they indulge in alcohol and smoking due to peer influence and socialisation. Miller-Kaene (2003) added his own submission that HBP is more prevalent in the blacks than whites by overall ration 2 to 1 and that the disease cuts across socio-economic and

educational levels. The educated were more aware of the attendant's complications and seem to be more compliant in taking their drugs and other instructions especially on diet.

Kabir, Illiyasu, Abubakar and Jubril (2004) discovered in their study that there is high prevalence of hypertension in Nigeria with Kano having the highest prevalence rate. They observed high incidence of complication even among those on treatment due to non-compliance explain the need for more awareness and immediate adjustment in the management pattern. From their study, those that do not comply are the less educated.

Sani, Mijinyawa, Adamu, Abdul and Borodo (2008) posited that the prevalence of HBP is increasing in Nigeria as well and that as the population ages; the prevalence will increase unless broad and effective preventive measures are implemented. Data from Non-Communicable Disease Survey (NCD) puts the prevalence rate in Nigeria at 20% and showed that Kano has the highest age adjusted hypertension prevalence rate of 23.8% in males and 17.7% in females. They stated that extrapolations from study in Nigeria and elsewhere indicate that 5% of deaths could be due to hypertension and that the reduction in attributable risks associated with treatment could be 2% which is over ten times higher than in the United States. They continued that epidemiological surveys from different countries have documented unsatisfactory control of arterial HBP.

Pillaye (2009) opined that since the 1920s HBP has been recognised in people of African descent (the blacks) in countries like South Africa, Kenya and the USA. He said, it is more frequent, more severe, more complicated and difficult to manage than in the white population. Studies have shown that migration from rural to an urban environment may be an associated factor. Also adoption of western lifestyle, environmental alteration rather than genetic influences predisposes to HBP.

In the study of Jain and Abengowe (2000) on the incidence of HBP in Ahmadu Bello University Hospital, Zaria, Kaduna State, more females are affected than the males. Of one hundred and twelve patients got, 65 were females while 47 were males. He said HBP is now common in Northern Nigerian contrary to previous opinion. They found out that males are more predispose to adoption of western lifestyle than females with the study of Pillaye (2009) but reverse is the case in the study of Jain et al (2000).

Blood pressure tends to rise progressively with increasing age. According to Micheal (2002) elevated BP is present in approximately 50% of people over 65 years and the onset is usually between 30 and 50 years. Elevated HBP is more prevalent in men and young adulthood and early middle age. After age 55, HBP is more prevalent in females. HBP runs in some families and children of hypertensive patients tend to have higher pressure than their contemporaries with normal blood pressure. The reason for this is that these people share environmental influences (Michael, 2002).

Ofuya (2007) in her study of the incidence of hypertension in a selected population of adults in the Niger Delta region, found out that HBP is prevalent among those with high income. Kabir et al (2004) discovered in their study on compliance to medication among hypertensives that the less educated and those with low socio economic status are the majority whereas, Bunker, Ukoli, Nwankwo, Omene, Cumeae, Holifield-Kenerdy Freeman et al (1992) discovered in their study that factors associated with hypertension in Nigerian civil servants are age and higher socio-economic status. This is supported by the study of Kadiri, Walker, Salako and Akinkugbe (1999) who posited in the study of blood pressure in urbanised Nigerian workers they found out that occupation, age, gender and lifestyle all have a correlate with hypertension. They discovered that systolic HBP rose in men and women over age 25, but rise in diastolic HBP started earlier and dropped in women only after age 44. About 10.4% of men and 7.1% of women were hypentensive in their population of study but the prevalence increased with age in both sexes. Blood pressure was also correlated to the years of education and the income level in men but not in women. This they said is because men are more stressed and they have to provide for the upkeep of the family. Regular and moderate alcohol consumption was also associated with hypertension.

Makusidi (2010), added his own contribution in a lecture he recently gave and added the following as the established risk factors of hypertension, heredity, high salt diet, obesity, physical inactivity (sedentary lifestyle) alcohol consumption, low vegetable and low fresh fruit diet, high saturated fat diet. The not well established factors he mentioned are high educational status and income, stress and low birth weight. Friedwald (2008) reiterated that although some risk factors are considered uncontrollable, one can avoid compounding the risks by taking care of the controllable ones. For example,

an African American can avoid salt in the diet and aging persons should maintain an active lifestyle.

On the aspect of prevention, Miller-kaene (2003) and Kabir et al (2004) found out that poor compliance to treatment was mainly due to ignorance on the fact the disease is a lifelong one. Discontinuation of treatment is always on the account of the patient is feeling better or no money to buy the drugs. The modes of therapy are effective only if each patient is willing to accept a part of the responsibility for carrying out the prescribed regimen.

Makusidi (2010) highlighted the lifestyle of modification to lowering the HBP and said this can prevent the disease. He said those that are obese could reduce their weight by eating healthy diet (increase fruits and vegetables and low fat dairy products) eliminate tobacco, controls spread, restrict alcohol and sodium intake, regular exercise should be encouraged, reduce environmental stress (Chockalingnam, 2007 Friedwald, 2008, Blumenthat, Babyak & Hindeliter 2010).

Purpose of the Study

The general purpose of the study is to establish whether age, gender and occupation as demographic factors are perceived to have influence on the causes and prevention of hypertension among patients in University of Ilorin Teaching Hospital, Ilorin, Kwara State.

Statement of the Problem

From studies conducted by other researchers, evidence abound that the prevalence and diagnosis of HBP is now on the increase. Blumenthat, Babyak & Hindeliter (2010) affirmed that nearly one billion people are affected by hypertension worldwide. The incidence of stroke and other cardiovascular diseases are now rampant. There is also increased awareness of people through patronage of other caregivers such as the traditional medicine or the Complementary Alternative Medicine Practitioners. It was observed that hypertension seems not to have respect for any age group. It is now seen in the young and old alike. Males and females also come down with the disease of which most are not even aware they have it until something bad happens and they are rushed to the hospital where after physical examination the doctors tell them it is hypertension. On any clinic day, a doctor can attend to as many as 50 patients. The influx of patients is so much that it is taking its

toil on both the human and material resources. Also records of admission into the Accident and Emergency Ward of UITH showed that a day can hardly pass by without a patient being admitted with stroke, which is a complication of hypertension. These are what prompted the researcher in finding out the influence of demographic factors on the causes and prevention of hypertension in University of Ilorin Teaching Hospital.

Research Hypotheses

1. Age does not significantly influence the perceived causes and prevention of hypertension among patients in University of Ilorin Teaching Hospital, Ilorin
2. Gender does not significantly influence the perceived causes and prevention of hypertension among patients in University of Ilorin Teaching Hospital, Ilorin.
3. Occupation does not significantly influence the perceived causes and prevention of hypertension among patients in University of Ilorin Teaching Hospital, Ilorin

Methodology

This study adopted the survey research method, which aims at finding out the perceived influence of demographic factors of age, gender and occupation, towards the causes and prevention of hypertension. The method permitted the researchers to critically and carefully describe and explain the variables that existed in the study based on the data that was collected. The target population comprised of the registered hypertensive patients attending the follow-up clinics at the Medical Outpatient Consulting Clinics of the University of Ilorin Teaching Hospital, Ilorin. The respondents cut across the three (3) clinics namely the cardiology, endocrinology and nephrology clinics. A sample of three hundred (300) respondents was used for the study. The sample was selected using purposive sampling technique to select the three clinics dealing directly with hypertensive patients while systematic random sampling technique was used to select every 5th person on the clinic register.

A researcher structured and developed instrument was used to gather data for the study. The instrument was tagged "Questionnaire on Demographic Factors and Perceived Causes of Hypertension (QDFPCH). The researchers were able to establish the validity of the instrument by giving it to five jurors in the areas of cardiology, endocrinology, nephrology and health education. The comments and observations of the jurors were used to prepare the final draft of the research instrument. The reliability of the instrument was established using a test re-test method. The instrument was administered on twenty (20) hypertensive patients attending the Civil Service Hospital, Ilorin at two weeks interval. The results were compared using Pearson Product Moment Correlation which yielded a correlation coefficient of 0.71. This clearly showed that the instrument was reliable.

The instrument was administered by the researchers with the help of four trained research assistants on the various clinic days (Tuesdays and Thursdays) over a period of four weeks. Consent of the respondents was sought in an appropriate section of the instrument while the respondents were given time to fill the questionnaire forms and same were retrieved immediately. The completed questionnaire forms were collated, coded and analysed using descriptive statistics of frequency counts, and percentage to analyse the demographic characteristics of the respondents. An inferential statistics of Chi-Square was used to determine the significant influence, based on the identified variables of age, gender and occupation. The alpha level was at 0.05 level of significance.

Results

Test of Hypotheses

H₀₁: Age does not significantly influence hypertension as perceived by patients in University of Ilorin Teaching Hospital.

Table 1: Chi square analysis of responses on the influence of age on perceived causes and prevention of hypertension.

S/N	Items	SA	A	D	SD	Calculated chi square	Df	Critical value	Decision
1	Hypertension is usually rampant among younger adults	142	121	18	19				
2	Younger people(17-30 years) do not usually have high blood pressure	150	111	35	04				
3	Aged people who do not modify their lifestyles may end up with hypertension	132	101	50	17	478.3	9	16.9	Rejected
4.	Older adults who do not have hypertension will be able to prevent themselves from getting the disease than people who are younger	125	130	25	20				

Table 1 revealed that the calculated chi square value of 478.3 at a degree of freedom of 9 is greater than the critical value of 16.9 at 0.05 alpha level of significance. Therefore, the null hypothesis which says that gender does not significantly influence perceived causes and prevention of hypertension as perceived by patients in University of Ilorin Teaching Hospital was rejected. This implies that aged people who do not modify their lifestyles may end up with hypertension.

H₀₂: Gender does not significantly influence hypertension as perceived by patients in University of Ilorin Teaching Hospital.

Table 2: Chi square analysis on responses on the influence of gender on perceived causes and prevention of hypertension.

S/N	Items	SA	A	D	SD	Calculated chi square	Df	Critical value	Decision
1	Hypertension is usually common among men than in women	130	121	10	39				
2	Men most often go through stress of sustaining their families thereby being more prone to hypertension	100	161	35	04				
3	Pregnancy sometimes make women to have pregnancy induced hypertension	152	71	60	07	536.2	9	16.9	Rejected
4.	Because men are more prone to western lifestyles like clubbing and alcohol intake, they may be more prone to hypertension	100	150	30	20				

Table 2 revealed that the calculated chi square value of 536.2 at a degree of freedom of 9 is greater than the critical value of 16.9 at 0.05 alpha level of significance. Therefore, the null hypothesis which says that gender does not significantly influence hypertension as perceived by patients in University of Ilorin Teaching Hospital was rejected. This implies that, because men are more prone to western lifestyles like clubbing and alcohol intake, they may be more prone to hypertension.

H₀₃: Occupation does not significantly influence the causes and prevention of hypertension as perceived by patients in University of Ilorin Teaching Hospital.

Table 3: Chi square analysis on responses on the influence of Occupation on perceived causes and prevention of hypertension.

S/N	Items	SA	A	D	SD	Calculated chi square	Df	Critical value	Decision
1	People who are deprived of adequate sleep due to the nature of their job are prone to hypertension	110	131	40	09				
2	Hypertension is common among people working in urban settings	92	168	30	10				
3	People who work overtime are more prone to hypertension than their counterparts	122	111	50	17	423.6	9	16.9	Rejected
4.	Most people in the urban areas will have more information on hoe to prevent themselves from hypertension	70	180	40	10				

Table 3 revealed that the calculated chi square value of 423.6 at a degree of freedom of 9 is greater than the critical value of 16.9 at 0.05 alpha level of significance. Therefore, the null hypothesis, which says that occupation does not significantly influence hypertension as perceived by patients in University of Ilorin Teaching Hospital, was rejected. This implies that people who are deprived of adequate sleep due to the nature of their job are prone to hypertension.

Discussion of Findings

Hypothesis one, which says that age does not significantly influence perceived causes and prevention of hypertension as perceived by patients in University of Ilorin Teaching Hospital was rejected. This is because, the

calculated chi square value of 478.3 at a degree of freedom of 9 was greater than the critical value of 16.9 at 0.05 alpha level of significance. This implies that hypertension is usually rampant among younger adults and older adults who do not have hypertension will be able to prevent themselves from getting the disease better than people who are younger. This findings negates the discovery of Micheal (2002) that elevated BP is present in approximately 50% of people over 65 years and the onset is usually between 30 and 50 years. The hypertensives that were the majority in the sample were those within the range of 25-34 years. This means that the disease is gaining a higher prevalence in this age group (young adulthood). This signals danger to future generation of middle and old adulthood. This age is the prime age of productivity and meaningful workforce.

Hypothesis two, which stated that gender does not significantly influence the causes and prevention of hypertension among patients in University of Ilorin Teaching Hospital was also rejected. This is because, that the calculated chi square value of 536.2 at a degree of freedom of 9 is greater than the critical value of 16.9 at 0.05 alpha level of significance. Therefore, the null hypothesis which says that gender does not significantly influence hypertension as perceived by patients in University of Ilorin Teaching Hospital was rejected. This implies that, because men are more prone to western lifestyles like clubbing and alcohol intake, they may be more prone to hypertension. This finding negates the findings from a similar study conducted by Jane and Abengowa (2000) that more females were affected by hypertension more than men. However, it is in line with Pilaye, (2010) who found that males are more predispose to adoption of western lifestyle than their female counterparts and this may make them more vulnerable to hypertension. The study found that, majority of the respondents were the males (75.3%). In addition, this gender is more exposed to deleterious habits such as smoking and alcohol consumption.

Hypothesis three, which stated that occupation will not significantly influence the causes and prevention of hypertension among patients in University of Ilorin Teaching Hospital was also rejected. This is due to the fact that the calculated chi square value of 423.6 at a degree of freedom of 9 is greater than the critical value of 16.9 at 0.05 alpha level of significance. Therefore, the null hypothesis, which says that occupation does not

significantly influence hypertension as perceived by patients in University of Ilorin Teaching Hospital, was rejected. This implies that people who are deprived of adequate sleep due to the nature of their jobs are prone to hypertension. This finding is in line with Kadiri et al, (1999) who discovered that occupation is a significant correlate of hypertension, especially among urban workers.

Conclusions

Based on the results, the following conclusions were drawn.

1. Age significantly influenced the perceived causes and prevention of hypertension among patients in University of Ilorin Teaching Hospital.
2. Significant influence exists between gender and the causes and prevention of hypertension.
3. Occupation significantly influenced the causes and prevention in this study group.

Recommendations

On the basis of the findings of the study, the following recommendations are made.

- The issue of non-communicable diseases gaining epidemic proportions should be viewed with utmost concern by all stake holders, (health professional, - doctors, nurses, health educators etc) this should begin at the grassroots i.e. community up to the national level. Efforts should be made to stop the rising profile of the disease in the community.
- The primary, secondary and tertiary health sectors should be adequately and actively involved in the fight against hypertension so as to reduce the prevalence globally. It is worrisome that the prevalence is rising especially in the younger age group.
- Unhealthy lifestyle among our youths especially the adolescents and young adults should be discouraged through the state ministry of health, youths and social welfare etc. The mass and social media of information could be utilized to disseminate this information.
- Health education should be intensified and properly disseminated to all strata of the citizenry. Taking cognizance of the high and low educational levels as it can be deduced from the study that all are

affected. The low level as a result of ignorance, and the high due to the type of lifestyle, i.e. the habits and diet. The health education/information should be given through outreach programmes or campaign by health professionals, those in the social services through the mass media, dramas, television talk shows, like Wale Adenuga's 'Super Story', 'My Mum and I' etc. These soap operas should be made to address issues of health especially the non-communicable ones like hypertension.

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