

Full Length Research Paper

Knowledge of hypertension among the staff of University of Ibadan, Nigeria

Ali Arazeem Abdullahi¹ and Jimoh Amzat²

¹Department of Sociology, University of Ilorin, Ilorin, Kwara State, Nigeria.

²Department of Sociology, Usmanu Danfodiyo University, Sokoto, Sokoto State, Nigeria.

Accepted 26 October, 2019

Several lines of evidence have suggested that hypertension and its related complications are major health problems not only in Nigeria but the entire world. Thus, this study examined the awareness about the risk factors and complications associated with hypertension at the University of Ibadan, Nigeria. Questionnaire instrument was used to collect data from a randomly selected 556 subjects selected across faculties, departments and sectional units of the University. The descriptive statistics showed that some members of staff demonstrated a relatively high level of knowledge about the complications associated with hypertension but knowledge about the risk factors and attitude towards the illness was still low. However, level of education significantly influences awareness of complications (at 0.05) and knowledge of risk factors (at 0.05). On-job screening and educative programmes are fundamental ways to improve knowledge about hypertension at the work-place.

Key words: Awareness, knowledge, hypertension, high blood pressure, risk factors, complications.

INTRODUCTION

In medical terms, hypertension is a blood pressure of 140/90 mmHg (millimetres of mercury) or more, based on at least two readings on separate occasions (Mlunde, 2007). The term is used to mean the same medical condition with high blood pressure (HBP) (Egan et al., 2003). Distinction is often drawn between primary or essential and secondary hypertension (Mlunde, 2007; Jimoh, 1992). The primary hypertension is the most common type and over 90% of hypertension cases fall within this category (Goodfriend, 1983; Mlunde, 2007). While primary hypertension is deep-rooted in genetic, socio-economic and environmental factors, secondary hypertension may be due to renal, endocrine and cardiovascular causes (Mlunde, 2007). Although hypertension is asymptomatic, it is usually attributed to severe health problems such as congestive heart failure, cardiovascular disease, renal failure, stroke, cognitive decline, dementia and even death (Hansson et al., 2000).

A significant number of studies have also established

clear evidence for a relationship between occupational stressors and elevation of blood pressure (Theorell et al., 1991; Schnall et al., 1992; Theorell et al., 1993; Melamed et al., 1998). Increased risks of high blood pressure are connected with chronic job strain (Landsbergis et al., 2003; Markovitz et al., 2004).

There are strong evidences to suggest that hypertension and its associated complications are major health challenges of the 21st century. As of year 2000, more than 900 million people were living with hypertension worldwide (Kearney et al., 2005).

It has been predicted that this number could jump to more than 1.5 billion in 2025 if drastic measures are not taken to control hypertension (Kearney et al., 2005).

Developing countries experiencing epidemiological transition from communicable to non-communicable chronic diseases often bear the brunt of hypertension (Dodu, 1988; WHO, 1993; Aubert et al., 1998; Nissinen et al., 1998; Reddy, 1993; Kusuma, 2009a).

In Sub-Saharan Africa, hypertension affects over 20 million people and remains a leading cause of hospitalisation and mortality (World Hypertension League, 2003). In Nigeria, hypertension is one of the most common non-communicable diseases (Akinkugbe, 1992) with more

*Corresponding author. E-mail: kwaraeleven@yahoo.com.
Tel: +2348069696844, +27761274988

than 11% of adult population living with the illness in African most populous country (Kadiri, 2001). More reported cases are unfolding among people living in urban areas of Nigeria (Odutola and Amu, 1997).

Despite effective therapies and lifestyle interventions, optimal control of blood pressure remains very serious health challenges to health professionals especially in most developing countries like Nigeria. Kadiri (2001) noted that less than one-third of people with hypertension in Nigeria undergo medications and less than one-third of those undergoing treatment have their problem being absolutely managed (Kadiri, 2001). The inability to adequately manage hypertension in Nigeria can be attributed to inadequate knowledge about the risk factors and its associated complications. As a result, this study examined knowledge about the risk factors and complications associated with hypertension among the staff of the University of Ibadan. This became necessary against the backdrop that identification of gaps in people's knowledge about hypertension is capable of aiding the development of messages to enhance that knowledge.

METHODS

Study setting

The University of Ibadan is situated in Ibadan town, the state capital of Oyo state, Nigeria. It is a pioneer and leading University in Nigeria. It was established in 1948 during the colonial administration as a satellite campus of University College London with the Faculties of Arts, Science and Medicine. In 1962, two years after Nigerian independence, the University became a full-fledged independent degree-granting institution (Postgraduate School Pamphlet, 2002). Since then, the University has grown in terms of infrastructure, student and staff strengths. Like any other University institution, there are three categories of staff; namely the academic, non-academic and junior staff.

The University has a medical unit that cares for the health of staff and students as well as people in the neighboring communities. It is popularly known as "Jaja" because it is located along Jaja Avenue within the campus. Some services render at the medical centre include Child Welfare and Immunity and Family Planning services. The Health Centre comprises of reception area, waiting room, injection room, five consulting rooms, a large laboratory, a pharmacy, a recovery room, a treatment room, a minor operation room and physiotherapy room, health visitor's clinic in 2 rooms, store rooms and other offices for administrative purposes (Ayeeni, 2003).

Method of data collection

In this survey, a self-administered questionnaire was employed to collect data from 556 randomly selected samples that spread across the faculties, departments and sectional units of the University. This method was economical in relation to time and resources, as large number of participants can be surveyed more quickly than in a longitudinal study (Bowling, 2002). A self-administered questionnaire allowed participants to complete their questionnaire in the privacy of their own homes or offices without any undue interference from the researcher, thereby minimising social desirability and interview bias. The questionnaire instrument was aimed at discovering staff's awareness of the risk factors

and complications of high blood pressure as well as establishing attitude and practice towards the illness. All participants completed a three page questionnaire containing standardised questions surrounding respondents' demographic variables, the risk factors and complications of hypertension and health habits. Overall, the questionnaire instrument allowed the researcher reach individual staff who were otherwise difficult to pin down for discussion or interview. Data were analysed with the use of both descriptive and inferential statistics.

RESULTS

The socio-demographic characteristics of the respondents

The socio-demographic features of the respondents indicated that 39% were females while 61% were males. All the respondents were between the ages of 20 and 60. The respondents between the ages of 20 and 29 were 31%, 50% were between the ages 40 to 49 while 15% were between 50 to 60 years of age. The highest respondents fell between the ages of 40 to 49 followed by ages 30 to 39. The majority of the respondents (86%) were married and the major form of marriage was monogamy.

About 7% of the married respondents practiced polygyny. Very few people were single (14%). The majority of the respondents who had University Degrees ranging from first to second degrees (BSc and Masters Degrees respectfully) represented 45%. Meanwhile, 22% who held PhDs were academic staff. More so, 15% held post secondary certificates like Higher National Diploma (HND) and National Certificate Examinations (NCE) all of whom were non-academic staff while 11% were Senior School Certificate Examinations (SSCE) holders. 3% had primary school certificate (PSC) and those who provided no response respectively. All those who held PSC, SSCE and NCE/OND were non-academic staff by virtue of their educational attainment. In all, a total of 200 respondents were academic staff out of which 50% were Assistant Lecturers and Lecturers II respectively. Among the respondents, 44% were Lecturer I and 56% were Senior Lecturers and above.

Awareness of the risk factors in hypertension

The knowledge of the risk factors attributed to hypertension was relatively low among the respondents. Figure 1 shows knowledge of risk factors in hypertension among the respondents. From the table, 35% of the respondents agreed very strongly that excess smoking can cause hypertension. 38% agreed but not strongly. About 19% was not certain. Also, 34% strongly agreed that excess alcohol intakes could cause high blood pressure while 44% agreed but not strongly. Few people could link heredity to hypertension. About 28% strongly agreed that hereditary could be a determinant factor in hypertension while 36% agreed but not very strongly.

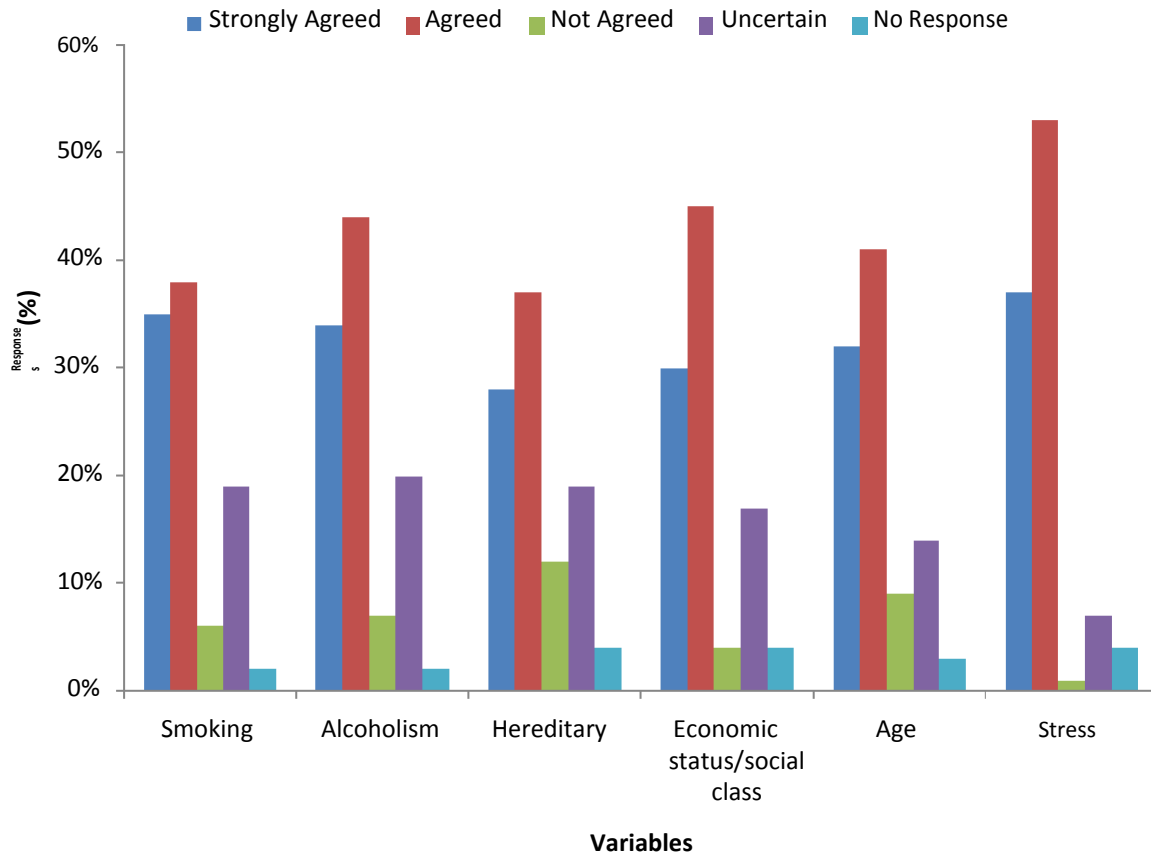


Figure 1. Percentage frequency distribution of respondents' knowledge on the risk factors in hypertension.

Table 1. Level of education and knowledge of risk factors.

Category and response	2 or more complications	Only 1 or none	Total
Secondary	21	47	68
Post-secondary	24	60	84
1st and 2 nd Degree	159	83	242
PhD and Above	101	19	120
Total	305	209	514

Significant at 0.05

About 30% strongly agreed that socio-economic status is a predisposing factor in hypertension. About one-third of the respondents strongly agreed that the elderly people are prone to hypertension than the young adults. 41% agreed with this as well but not strongly. Another 37% of the respondents strongly linked stress to high blood pressure. Figure 1 presents the results in the form of charts.

Furthermore, there is significant relationship between level of education and knowledge of risk factors of hypertension (significant at 0.05). Table 1 signifies that there is a positive relationship between the two variables. Only 514 respondents who responded to the question about their level of education were cross-tabulated with knowledge of risk factors. Those who attended only

primary school (26 respondents) were also left out. Generally, education could play significant role in response to health and illness conditions.

Awareness of the complications of hypertension

The knowledge about complications associated with hypertension was considerably high. For instance, 84% believed that hypertension can cause stroke while 80% of the respondents agreed very much that severe hypertension can lead to heart attack which could lead to the death of the affected person. Only 40% agreed that hypertension can result to retinal failure. Figure 2 shows the details of respondents about the complications

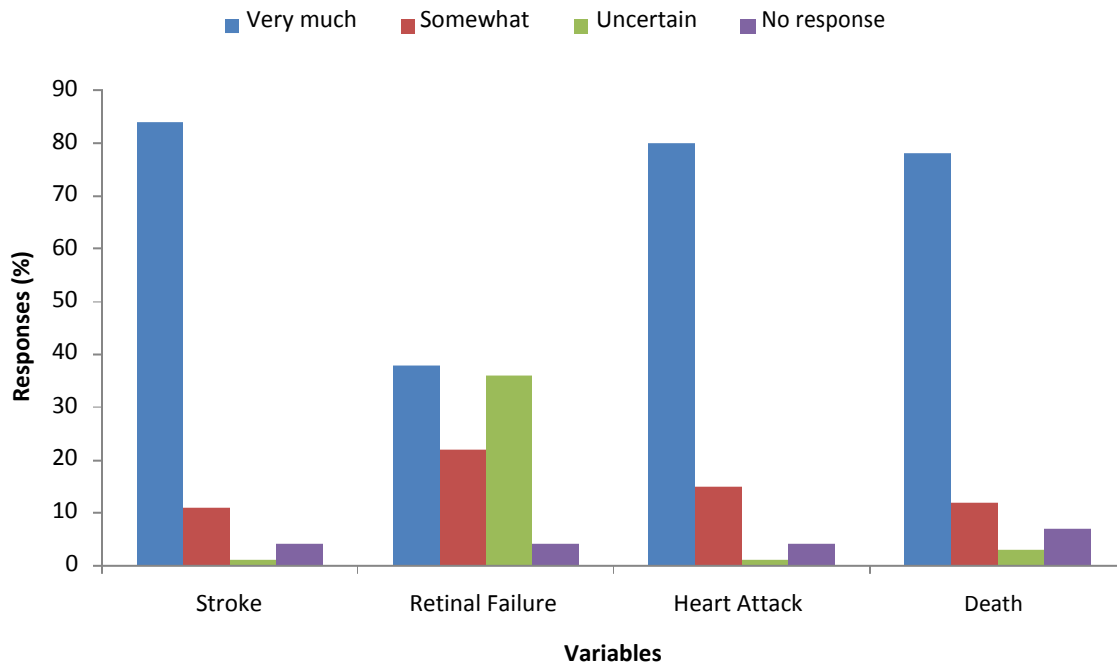


Figure 2. Percentage distribution of respondents' knowledge about complications of hypertension.

Table 2. Level of education and awareness of complications.

Category and Response	2 or more complications	Only 1	None	Total
Secondary	19	17	32	68
Post-secondary	52	21	11	84
1st and 2 nd Degree	182	41	19	242
PhD and Above	81	28	11	120
Total	334	107	73	514

Significant at 0.05

associated with hypertension. Table 2 also shows that there is a positive relationship between level of education and awareness of complications of hypertension (significant at 0.05).

Attitude and practice towards hypertension

About 90% of the respondents considered hypertension a very serious health problem. Yet, a number of the respondents adopted a lifestyle contradicting their perception about hypertension. This category of staff included those in the habit of smoking cigarettes and taking alcohol. About 28% were regular smokers while 32% were regular drunkard. Another group of respondents (35%) were regular smokers and drunkard.

This was very common among male participants. About 21% claimed they were hypertensive and that they were on hypertensive drugs. This report was common among the older participants aged over 60 years. Some

participants within this category believed there was nothing they could do to change their drinking and smoking lifestyles. 31% of the respondents claimed they visited the clinics to check their blood pressure level. 57% did not use to checking the blood pressure. Of all the respondents, 31% made use of the public hospitals and the school health centre in case of health problems while 27% made use of private hospitals outside the school environment.

Those who used private clinics claimed that services provided at the private centre were better than the public. 68% of the respondents would be willing to check their blood pressure in the future in order to know their blood pressure levels.

DISCUSSION

The study investigated awareness about hypertension in one of the tertiary institutions in Nigeria. It was shown

that 35% agreed that smoking is a risk factor in hypertension with 38% agreeing but not strongly. About the same percentage thought that excess alcohol intakes can induce the blood pressure level. Only 28% believed that hypertension can be hereditary. In addition, 32% strongly believed that elderly people are prone to hypertension (age factor) with 41% agreeing but not strongly. It can, therefore, be deduced from this that knowledge about the risk factors associated with hypertension is inadequate despite the fact that the study was conducted in University environment where such knowledge is expected to be high. This finding is supported by previous studies which found inadequate knowledge about the risk factors associated with the high blood pressure among the populations studied (Biehn et al., 1984; Lee, 2007; Kusuma et al., 2009; Ike et al., 2010).

Among the studied population, hypertension was considered a very serious health problem. It was believed that hypertension if not managed properly could lead to death.

About 84% of the respondents quite agreed that stroke is one of the complications associated with hypertension although very few subjects associated hypertension to retinal failure. About 80% agreed very much that hypertension can lead to heart attack which could eventually lead to death. This contradicts Kusuma's et al. (2009) finding among neo and settled migrants in New Delhi, India where a significant number of participants did not believe that hypertension could lead to complications. The difference in findings can be explained by the socio-economic factors of the subjects.

Kusuma (2009) in another study among the migrants in New Delhi found that awareness and knowledge about hypertension and its consequences were inadequate despite being perceived as serious health problem. In a recent study in Nigeria, Ike et al. (2010) found a poor level of perception of hypertension and awareness of the lifestyle modification measures, but discovered a high level of enthusiasm on the part of the participants to adopt the lifestyle measures to avoid complications. A positive relationship between socio-economic status and knowledge of hypertension has been previously documented (Min et al., 2010).

The study has found that level of education may have positive impact on knowledge about the risk factors and complications of hypertension. However, Oliveria et al. (2005) have observed that it is possible for people to demonstrate an awareness of hypertension but not having a comprehensive understanding of the health condition. This creates an opportunity in the studied institution to focus on educational programmes that would have direct impact on positive health behaviours. According to Viera et al. (2008) the need to increase awareness about hypertension and improve positive health behaviour in the United States of America (USA) led to the establishment of the National High Blood Pressure Education Programme (NHBPEP). NHBPEP has, to a large

extent, achieved its mandate.

Today, research has shown that more than 75% of Americans are aware of the relationship between hypertension, strokes and heart disease (Viera et al., 2008). Other studies have also emphasised the positive relationship between education and knowledge of hypertension (Mlunde, 2007; Egan et al., 2003; Samal et al., 2007). A study by Dawes et al. (2010) found a positive impact of patient's education booklet and BP tracker on knowledge about hypertension. Therefore, there is a room for public education in the study area to avoid the devastating consequences of what can be called "half knowledge" about hypertension.

Conclusion

The study has demonstrated that the majority of the respondents had a fair knowledge about complications of hypertension. However, knowledge about the risk factors and attitude toward hypertension was poor. Perhaps, further qualitative study might be required to probe deep into the fundamental reasons for the negative health behaviours towards hypertension. In the main time, one of the cornerstones to achieving positive health behaviour towards hypertension is through public education. This calls for compulsory on-job screening and educative programmes in the form of seminars and conferences for all categories of staff. This might enhance positive health behaviour, motivation and high level of productivity in the University environment. It is important that the University utilises the resources of relevant Departments to achieve this important task.

REFERENCES

- Abdullahi AA (2004). 'Knowledge, Attitude and Practice towards Hypertension among the Staff of the University of Ibadan'. M.Sc Thesis. Department of Sociology, University of Ibadan, Nigeria.
- Akinkugbe OO (ed.) (1992). Non-Communicable Disease in Nigeria. Federal Ministry of Health. Lagos, pp. 1-12.
- Aubert L, Bovet P, Gervasoni J, Rwebogora A, Waeber B, Paccaud F (1998). Knowledge, Attitudes, and Practices on Hypertension in a Country in Epidemiological Transition'. *Hypertension*, 31: 1136-1145.
- Ayeni B (2003). Knowing the University of Ibadan Campus, Ibadan. RSS.
- Biehn J, Stewart M, Molineux JE (1984). Patients' Knowledge of Hypertension'. *Can. Fam. Physician*, 30: 1061-1064.
- Bowling A (2002). *Research Methods in Health: Investigating Health and Health Services*. Berkshire: McGraw - Hill Education.
- Dawes MG, Kaczorowski J, Swanson G, Hickey J, Karwalajtys T (2010). The Effect of a Patient Education Booklet and BP 'Tracker' on Knowledge about Hypertension: A Randomized Controlled Trial. *Family Pract.*, 27: 472-478.
- Doty SRA (1988). Emergence of Cardiovascular Diseases in Developing Countries. *Cardiology*, 75: 56-64.
- Egan BM, Lackland DT, Cutler NE (2003). 'Awareness, Knowledge, and Attitudes of Older Americans about High Blood Pressure: Implications for Health Care Policy, Education and Research'. *Arch. Int. Med.*, 163: 681-687.
- Goodfriend T (1983). *Hypertension, Essentials Current, Concepts of Cause and Control*. New York: Grune and Stratton Inc.
- Hansson L, Kilander L, Ohrvall M (2000). *Epidemiology of*

- Hypertension. In *Hypertension: A Companion to Brenner and Rector's the Kidney*. Weber O (ed.). St, Louis: WB. Saunders Company. pp. 4 -19.
- Ike SO, Aniebue PN, Aniebue UU (2010). 'Knowledge, Perceptions and Practices of Lifestyle-Modification Measures among Adult Hypertensives in Nigeria'. *Trans. Royal Society Trop. Med. Hyg.*, 104: 55-60.
- Jimoh A (1992). Means to the end of Hypertension". *The Guardian*, August, 20: 17.
- Kadiri S (2001). A Bottle of Beer Per Day Brings Hypertension Closer'. *The Nigerian Tribune*, Thursday, April 19: 16.
- Kearney PM, Whelton M, Reynolds K, Whelton PK, He J (2005). Global Burden of Hypertension: Analysis of Worldwide Data'. *Lancet*, 365: 217-223.
- Kusuma YS, Gupta SK, Pandav CS (2009a). Knowledge and Perceptions about Hypertension among Neo- and Settled-Migrants in Delhi, India'. *CVD Prev. Control*, 4: 119-129.
- Kusuma YS (2009b). Perceptions on Hypertension among Migrants in Delhi, India: a Qualitative Study'. *BMC Public Health*, 9: 267.
- Landsbergis PA, Schnall PL, Pickering TG, Warren K, Schwartz JE (2003). Life-course Exposure to Job Strain and Ambulatory Blood Pressure in Men'. *Am. J. Epidemiol.*, 157(11): 998-1006.
- Lee Y (2007). Awareness of Blood Pressure among Older Adults: A Cross-Sectional Descriptive Study'. *Int. J. Nurs. Stud.*, 44: 796-804.
- Markovitz JH, Matthews KA, Whooley M, Lewis CE, Greenlund KJ (2004). Increases in Job Strain are Associated with Incident Hypertension in the CARDIA Study'. *Annals. Behav. Med.*, 28: 4-9.
- Melamed S, Kristal-Boneh E, Harari G, Froom P, Ribak J (1998). Variation in the Ambulatory Blood Pressure Response to Daily Work Load: the Moderating Role of Job Control'. *Scand. J. Work. Environ. Health*, 24(3): 190-196.
- Min H, Chang J, Balkrishnan R (2010). Socio-demographic Risk Factors of Diabetes and Hypertension Prevalence in Republic of Korea'. *Int. J. Hyperten.*, pp. 1-6.
- Mlunde L (2007). Knowledge, Attitude and Practices Towards Risk Factors for Hypertension in Kinondoni Municipality, Dar es Salaam'. *DMSJ*, 14(2): 59-62.
- Nissinen A, Bothig S, Granroth H, Lopez AD (1988). 'Hypertension in Developing Countries. *World Health Stat. Q.*, 41: 141-154.
- Odutola TA, Amu VE (1997). Multiple Drug Therapy of Essential Hypertension - Is it Necessary'? *Niger. Q. J. Hospital. Med.*, 7(4): 332-334.
- Oliveria SA, Chen RS, McCarthy BD, Davis CC, Hill MN (2005). Hypertension Knowledge, Awareness, and Attitudes in a Hypertensive Population. *J. Gen. Int. Med.*, 20(3): 219-225.
- Reddy KS (1993). Cardiovascular Diseases in India'. *World Health Stat. Q.*, 46: 101-107.
- Samal D, Greisenegger S, Auff E, Lang W, Lalouschek W (2007). The Relation between Knowledge about Hypertension and Education in Hospitalised Patients with Stroke in Vienna'. *Stroke*, 38: 1304 - 1308.
- Schnall PL, Schwartz JE, Landsbergis PA, Warren K, Pickering TG (1992). Relation between Job Strain, Alcohol, and Ambulatory Blood Pressure'. *Hypertension*, 19(5): 488-494.
- Theorell T, De Faire U, Johnson J, Hall EM, Perski A, Stewart W (1991). Job Strain and Ambulatory Blood Pressure Profiles'. *Scandinavian J. Work. Environ. Health*, 17: 380-385.
- Theorell T, Ahlberg-Hulten G, Jodko M, Sigala, F, de la Torre B (1993). Influence of Job Strain and Emotion on Blood Pressure in Female Hospital Personnel during Work Hours'. *Scand. J. Work. Environ. Health*, 19(5): 313-318.
- The Post Graduate School (2002). *Post Graduate School Regulations Governing Higher Degrees*. University of Ibadan, Nigeria.
- Viera AJ, Cohen LW, Mitchell CM, Sloane PD (2008). High Blood Pressure Knowledge among Primary Care Patients with Known Hypertension: A North Carolina Family Medicine Research Network (NC-FM-RN) Study'. *JABFM*, 21(4): 300-308.
- World Health Organization (WHO) (1993). 'Cardiovascular Diseases in Developing Countries. *World Health Stat. Q.*, 46: 90-150.
- World Hypertension League (WHL) (2003). *World Hypertension League News Report on the International Conference for Arterial Hypertension and Cardiovascular Disease*. Brussels: World Hypertension League. pp. 1-4.