



## Quality of Life and Awareness of Hypertension among Primary School Teachers in a Semi-urban Town, South Western Nigeria

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### Abstract

**Background:** Hypertension is a silence killer in developing nations, its sequela has led to reduced quality of life among the population. **Aim:** This study assessed the quality of life and, awareness of hypertension among primary school teachers in a semi-urban town in Southwestern Nigeria. **Methods:** This study adopted a descriptive cross-sectional design and eight public primary schools were selected for the study in a semi-urban town of Southwestern Nigeria. One hundred primary school teachers were selected for the study using the multistage sampling technique. Data were collected using a self-administered structured questionnaire. Data collected were analyzed with SPSS version 22.0, descriptive statistics were used to present the data. Ethical approval was sought from the institutional review board and informed consent from the participant. **Results:** The prevalence rate of hypertension among the respondents was low, as only 32% were hypertensive. Findings further showed that the majority (54%) of the respondent had a moderate level of awareness of hypertension. Furthermore, the result from the study indicated that 57% of the respondents had a fair quality of life. **Conclusion:** The study concluded that there was the fair quality of life and low prevalence with moderate awareness of hypertension among the respondents among the study population. In the light of this, there is a need for nurses to encourage primary school teachers to continuously engage in health-promoting activities in order to improve their quality of life.

**Keywords:** *Quality of Life, Prevalence, Awareness, Hypertension, School Teachers*

### Introduction

Non-Communicable diseases (NCDs) are the leading causes of morbidity and mortality, and also economic burdens throughout the world (Mokdad, 2016). According to the World Health Statistics in 2012, of the estimated 57 million global deaths in 2008, 36 million (63%) were due to non-communicable diseases (NCDs). The largest proportion (48%) of NCD deaths is caused by cardiovascular diseases, hypertension inclusive (Akinkula *et al.*, 2016). According to Gaciong *et al.*, (2013),

hypertension or raised blood pressure is a condition where the blood vessels are continuously exposed to large amount of stress. Hypertension is known as the “silent killer” as many individuals may not appear with symptoms and it causes 45% of deaths owing to cardiovascular disease and 51% of deaths owing to stroke (Gaciong *et al.*, 2013).

Hypertension is one of the most prevalent non-communicable disease and the most important preventable risk factor for

premature death worldwide, being responsible for an estimated 45% of deaths due to heart disease and 51% of deaths due to stroke globally (Kearney *et al.*, 2005). In terms of attributable deaths, raised blood pressure is one of the leading behavioural and physiological risk factor to which 13% of global deaths are attributed (Kandikattu, *et al.*, 2017).

Hypertension is reported to be the fourth contributor to premature death in developed countries and the seventh in developing countries (Lee *et al.*, 2019). World Health Organisation (2009), hypertension is the first and the most common risk factor for stroke, cardiovascular and renal diseases. It has been known as a main modulated disability around the world. Data from World Health Organization, (2009) indicated that hypertension causes about 30% of all deaths in the world, which corresponds to almost 15 million deaths each year, with the majority (9 million) in developing countries. These data rank Cardiovascular Disease as a pandemic, whose treatment requires the adoption of effective primary and secondary preventive measures. The number of patients with hypertension has increased from 600 million cases in 1980 to 1 billion in 2008; over 40 percent of adults were known to have hypertension (Motlagh *et al.*, 2015)

Also, it was suggested that, by 2025, 1.54 billion adults will be hypertensive (Kumar, 2013). Hypertension is one of the non-communicable diseases that are advancing at a fast pace across the world. According to World Health Organization (2013), the prevalence of hypertension is highest in the African region as it was put at 46% in adults aged 25 years and above, while the lowest in the American region. A high prevalence of hypertension has been reported in a recent study conducted in Nigeria and is the most common non-communicable disease in Nigeria, with major public health importance (Akinkula *et al.*, 2016). Overall, the prevalence of hypertension in Nigeria has been observed to have a range of 8-64%

depending on the study population, type of measurement and cut-off value used for defining hypertension (Ogah *et al.*, 2012). Hypertension and its complications constitute approximately 25% of emergency medical admissions in urban hospitals in Nigeria (Ajayi *et al.*, 2016).

However, the country's statistics on hypertension are unreliable; "most data are outdated speculation based on mathematical models and surveys that are scanty and unrepresentative with low validity (Ajayi, *et al.*, 2016).

Furthermore, a low level of awareness about a medical checkup for hypertension has been reported globally (Noubani *et al.*, 2018). This low level of awareness about regular medical checkup could be attributed to the fact that people are too busy to check their health status which in turn increases the number of cases of hypertension (Noubani *et al.*, 2018). Antecedotal experience shows that hypertension cuts across every social class. Both lower-income and higher-income groups may be at increased risk of developing hypertension, the aetiology of hypertension is multifactorial. Aside from genetic factors, several behavioural and socioeconomic factors such as income, education, and occupation are indicators in determining the awareness of hypertension both in developing and developed countries.

In addition, there are certain medical conditions that can also predispose an individual to the likelihood of developing hypertension such as obesity, which increases the chances of developing hypertension by 1.8 times, and diabetes, which increases the chances by 2.1 times (Adefuye *et al.*, 2009). The modifiable risk factors present for hypertension include tobacco use, harmful intake of alcohol, stress, lifestyle, obesity, unhealthy diet, and lack of physical activity (Park, 2015).

Among people living with chronic illness like hypertension, QoL is of great concern (Guyatt, *et al.*, 1993). According to Idler and

Benyamini(1997), this is because while the provider is the concern with the measures of the condition, the person involved is most likely concerned with well-being and functioning. The blood pressure and overall health of the individual with hypertension is found to be greatly affected by their quality of life (Park, 2015). The teaching profession is a highly stressful occupation due to enhanced psychosocial stress at the workplace. Teacher's work overload has been a subject of intense research. If these risk factors are not taken into consideration and further health education and awareness are not promoted, the deaths owing to cardiovascular diseases are projected to rise further. In furtherance, the prevalence rate is an important tool for assessing the magnitude and burden of a health event. Due to the foregoing, conducting this study will help in determining the quality of life, prevalence and awareness of hypertension among teachers in Ile-Ife.

#### **Materials and Methods**

A descriptive cross-sectional design was utilized in the study. The study was conducted in Ife Central Local Government Area, Osun State, Nigeria. The local government has many private and public primary schools that spread all over its nooks and crannies. The National Union of Teachers (N.U.T) record gave a total population of 423 teachers in public primary schools of Ife Central Local Government. Using Taro Yamane formula, a sample size of 100 was calculated. Therefore, 100 teachers in eight (8) primary schools in Ife Central Local Government were recruited. The multistage sampling method was used for the sample selection. The first stage was the use of purposive sampling technique to choose Ife Central Local Government out of the four local governments in Ife city because it is located in the heart of the town, while the second stage systematic sampling was used to select eight (8) public primary schools within the local government. The sampling frame was developed and every 5th school on the list was selected for the study. The last stage was

the adoption of a simple random technique to recruit the teachers from each school.

The study utilized a structured questionnaire for data collection. It comprised four sections. Section A: elicit information about socio-demographic data of respondents such as Age, Sex: Male, Religion, Marital Status, Tribe, Level of education and Grade level/Rank.

Section B: is a self-structured questionnaire that assessed the respondents' perceived quality of life. It has seven questions and it is on a scale of Very Dissatisfied =1, Dissatisfied=2, Satisfied=3 and Very Satisfied=4 designed to determine the relationship between hypertension and quality of life.

Section C: assessed the awareness of hypertension, it had 15 questions this section had 5 True or False questions and 10 items on a 4-point Likert scale. The questions were graded as; "True" =1, False = 0. While, strongly agree = 4, Agree =3, Disagree =2, strongly Disagree =1. Section D: had five questions that were designed to assess the prevalence of hypertension among primary school teachers. It included questions eliciting if respondents had been diagnosed of hypertension or not in past years. Furthermore, the blood pressure of the respondents was measured to establish if the respondent had Hypertension.

Data collected were coded and analysed using SPSS software version 22.0. Descriptive statistics such as frequency counts and percentages. Ethical approval for the study was obtained from the Institutional Review Board of IPH, OAU with approval number: 12/1025. Informed consent was obtained from all the teachers selected for this study. Confidentiality and anonymity of participants' information were maintained at all times. Participants were given the right to withdraw voluntarily from the study at any time.

Furthermore, following permission from the Local Government Authority, branch

chairman of Nigerian Union of Teachers (NUT) and heads of the selected primary schools, questionnaires were distributed to the respondents during their long break time.

**Results**

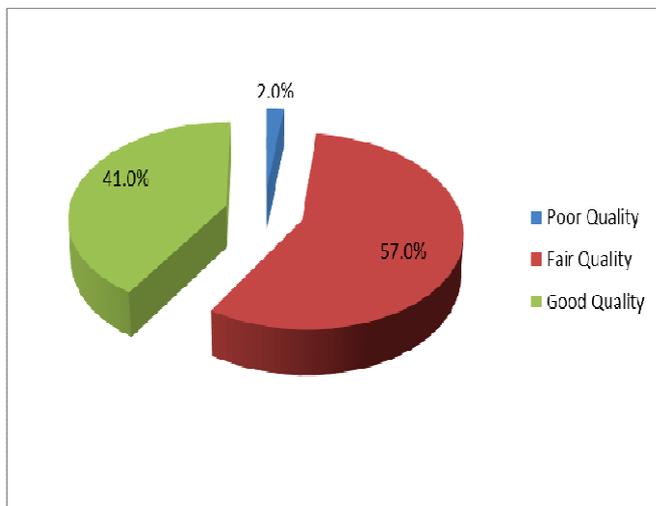
**Socio-demographic Characteristics of Respondents**

**Table 1: Socio-demographic Characteristics of Respondents**

Variables	f	%
<b>Age</b>		
30-34	1	1.0
35-39	7	7.0
40-44	16	16.0
45-49	6	6.0
50-54	24	24.0
55-59	46	46.0
<b>Sex</b>		
Male	19	19%
Female	81	81%
<b>Religion</b>		
Islamic	8	8%
Christian	92	92%
<b>Marital Status</b>		
Single	6	6%
Married	91	91%
Separated	1	1%
Widowed	2	2%
<b>Tribe</b>		
Yoruba	96	96%
Igbo	4	4%
<b>Level of Education</b>		
Grade II	1	1%
N.C.E	83	83%
Degree	16	16%
<b>Grade Level</b>		
Level 5	2	2%
Level 6	2	2%
Level 7	17	17%
Level 8	3	3%
Level 12	29	29%
Level 13	14	14%
Level 14	31	31%
Level 15	2	2%
<b>Years in service</b>		
Less than 5	5	5%
6-10	19	19%
11-15	16	16%
16-20	24	24%
21-25	35	35%
26-30	1	1%

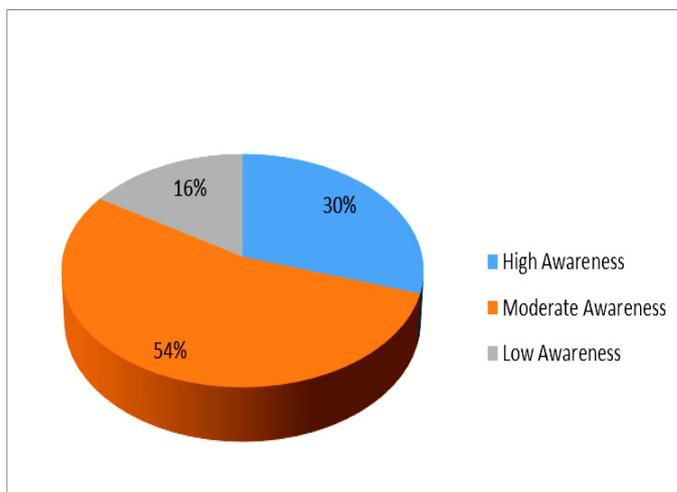
Results from the study show that the majority of the teachers, 43% were aged between 55 and 59 years old. Similarly, 81% of them were females, and 92% are Christians, the greatest percentage of them (91%) were married while

96% are of Yoruba origin, 83% were NCE holders with officers on grade level 14 constituting the highest fraction (31%) and 35% of the respondents have spent more than 20 years in service.



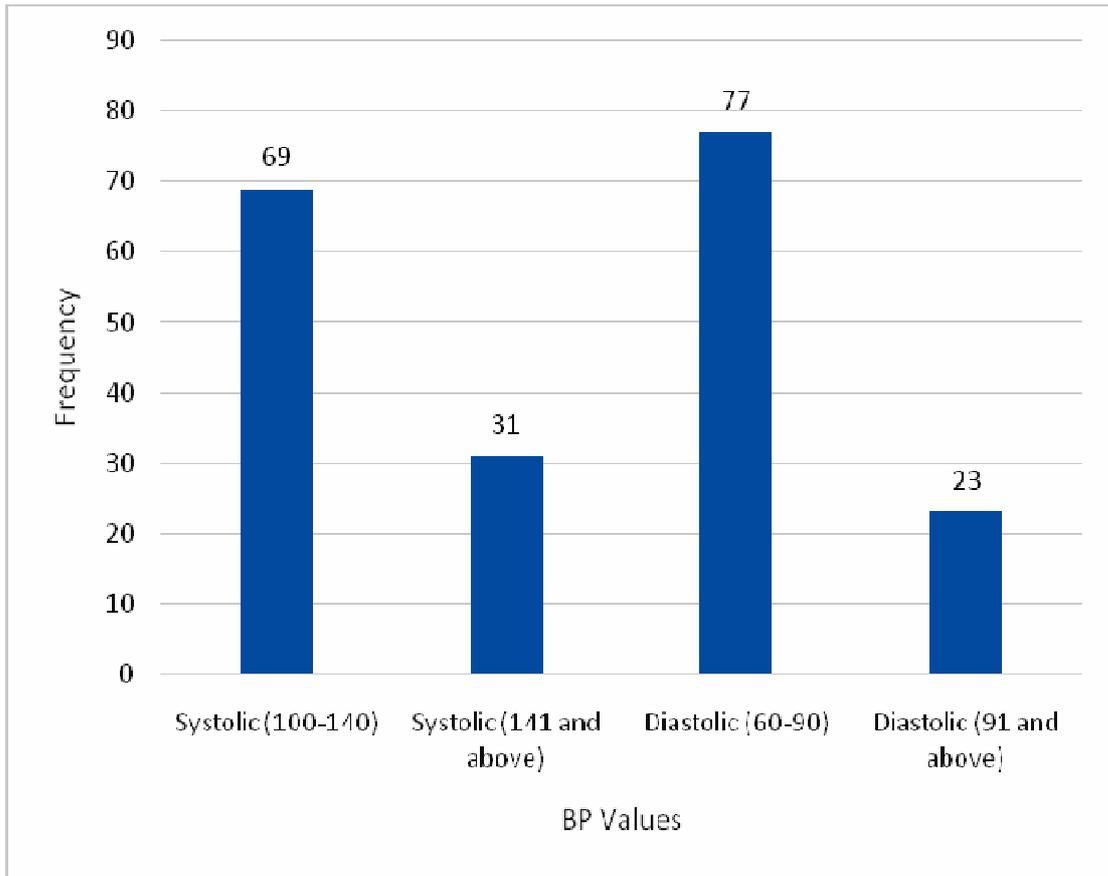
**Figure 1: Respondents' Quality of Life.** Figure 1 shows majority of the respondents (57.0%) had a fair quality of life while 41.0%

had good quality of life and 2.0% had a poor quality of life. N=100



**Figure 2: Respondents' Awareness of Hypertension** Figure 2 shows a little above average (54.0%) of the respondents had moderate awareness of

hypertension while 30.0% had high awareness and 16.0% had a low awareness of hypertension.



**Figure 3:** Prevalence of Hypertension

Figure 3 shows that less than half 31% has systolic blood pressure greater than 140 mmHg while 23% of the respondents had

diastolic blood pressure that is greater than 90 mmHg.  
N= 100

**Table 3:** Prevalence of Hypertension

Variables	F	%
<b>Diagnosed of Hypertension</b>		
Yes	31	31
No	68	68
<b>Year of diagnosis</b>		
2006	2	2
2007	2	2
2010	7	7
2012	3	3
2013	2	2
2015	5	5
2016	6	6
2017	5	5

Result from the study indicates that the prevalence rate of hypertension among the respondents is 31%.

## Discussion

The findings from this study show that the prevalence rate of hypertension among the respondents was 31%. This is at variance to a finding by Ibrahim *et al.*, in 2008, who found a prevalence of 25.2% among school teachers of Jeddah, Kingdom of Saudi Arabia. Likewise, our findings are at variance with that of a study carried out in Port-Harcourt, South southern Nigeria in a hospital-based study, where prevalence was 21.3%, (Ekwunife *et al.*, 2010; Onwuchekwa and Chinenye, 2010); and in Bayelsa state, where the prevalence of hypertension was 27.8 % (Egbi, *et al.*, 2013). In other related studies, the prevalence rates were found to be lower, Kumar *et al.*, (2013) reported 4% prevalence rate among school teachers in India, which conflicts with the findings from this study. Greiw *et al.*, (2010) in their study among school teachers in Benghazi, Libya also documented 15.1% among them, which also contends with the findings from this study. However, the study conducted in Bengaluru in 2014, where the prevalence of hypertension was 40% among teachers is also at variance with our findings. The low prevalence of hypertension could be that participant does regular checkup since they are conscious of their health.

The majority of the respondents claimed that they had a fair quality of life, they are satisfied with their health as this is in dissimilarity with HRQOL of people with hypertension can be adversely affected by hypertension itself and side-effect of treatments. This is supported by a study, carried out by Brito *et al.*, (2014) who evaluated the impact of hypertension on HRQOL only in hypertensive patients observed that, although these patients consider hypertension not severe and curable, it interferes with their HRQOL. One can infer that this may be due to the changes in physical and psychological functions among the affected individuals.

Furthermore, the findings from this study shows that the respondents had moderate level of awareness of hypertension. This finding conflicts with a finding by Awosan, *et al.*, (2013) in Sokoto, who found that one-third of the teachers in their study had hypertension with poor awareness of the disease. Furthermore, several other studies have also documented lack of awareness on hypertensive diseases (Mboera *et al.*, 2009; Imbahale *et al.*, 2010). Awareness of hypertension is a very positive step towards prevention and proper management of existing cases. It is envisaged that high awareness of these conditions will prompt people to seek health care timely and reduce possibilities of developing complications. Therefore, failure to recognise the risk factors diminishes the ability to prevent oneself from the disease.

## Conclusion

The study brought to fore the prevalence of hypertension among school teachers with a view to explore what their quality of life is. However, the prevalence of hypertension was low and the quality of life was claimed to be fair among those living with hypertension. Therefore, Nurses must strive to ensure that adequate channels for campaigns, health talks and seminars are utilized to pass correct information about hypertension to the public especially teachers, in order to reduce the burden of hypertension in Nigeria. They must also advocate and encourage lifestyle modification, and regular medical checkups among people to reduce mortality from the disease.

**Relevance to Clinical Practice:** This study is relevant to clinical practice because it generated empirical data on the prevalence of hypertension and quality of life among primary school teachers in the southwestern part of Nigeria which can be used to develop an educational package on health promotion for teachers in the nearest future with the ultimate aim of promoting their wellbeing.

This will have an overall effect on their output as teachers of the future generation.

### Recommendations

Sequel to the sampled information gathered by the researcher, the following are recommended.

Teachers should endeavour to check their blood pressure at least twice in a month at hospitals.

- ✧ There should be increase and continuous awareness on hypertension through media and health workers.
- ✧ Primary school teachers should be encouraged to exercise regularly and comply with drug regimen when been diagnosed of hypertension.
- ✧ School clinic services should be made available and strengthen in public government schools.

### Conflict of Interest

The authors declare no conflict of interest

### References

- Adefuye, B.O., Adefuye, P.O., Oladapo, O.T., Familoni, O.B., Olurunga, T.O., (2009). Prevalence of hypertension and other cardiovascular risk factors in an African sub-urban religious community. *Niger Med Pract*,55:4-8.
- Akinlua, J. T., Meakin, R., Umar, A. M., & Freemantle, N. (2015). Current prevalence pattern of hypertension in Nigeria: A systematic review. *PloS one*, 10(10), e0140021. doi: [10.1371/journal.pone.0140021](https://doi.org/10.1371/journal.pone.0140021)
- Ajayi, I. O., Sowemimo, I. O., Akpa, O. M., & Ossai, N. E. (2016). Prevalence of hypertension and associated factors among residents of Ibadan-North Local Government Area of Nigeria. *Nigerian Journal of Cardiology*, 13(1), 67.
- Awosan, K. J., Ibrahim, M. T. O., Sabir, A. A., & Ejimodu, P. (2013). Awareness and prevalence of risk factors of coronary heart disease among teachers and bankers in Sokoto, Nigeria. *J Med Med Sci*, 4(9), 337-342.
- Brito, A. D. F., de Oliveira, C. V. C., Santos, M. D. S. B., & Santos, A. D. C. (2014). High-intensity exercise promotes postexercise hypotension greater than moderate intensity in elderly hypertensive individuals. *Clinical physiology and functional imaging*, 34(2), 126-132.
- Egbi, O. G., Okafor, U. H., Meibodei, K. E., Kunle-Olowu, O. E., & Unuigbo, E. I. (2013). Prevalence of hypertension in an urban population in Bayelsa State, Nigeria. *Journal of Medical Research and Practice*, 2(1), 11-15.
- Ekwunife, O. I., Udeogaranya, P. O., & Nwatu, I. L. (2010). Prevalence, awareness, treatment and control of hypertension in a Nigerian population. *Health* 2010; 2:731-735.
- Gaciong, Z., Siński, M., & Lewandowski, J. (2013). Blood pressure control and primary prevention of stroke: summary of the recent clinical trial data and meta-analyses. *Current hypertension reports*, 15(6), 559-574. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3838588/>
- Greiw, A. S., Gad, Z., Mandil, A., Wagdi, M., & Elneihoum, A. (2010). Risk Factors for Cardiovascular Diseases among School Teachers in Benghazi, Libya. *Ibnosina Journal of Medicine & Biomedical Sciences*, 2(4), 168-177. DOI: 10.4103/1947-489X.210991
- Guyatt, G. H., Feeny, D. H., & Patrick, D.L. (1993). Measuring health-related quality of life. *Ann med*. 1993; 118: 622-629.
- Ibrahim, N. K., Hijazi, N. A., & Al-Bar, A. A. (2008). Prevalence and determinants of prehypertension and hypertension among preparatory and secondary school teachers in Jeddah. *J Egypt Public Health Assoc*, 83(3-4), 183-203.

- Idler, E.L. & Benyamini, Y. (1997). A Review of twenty-seven community studies. *J Health Soc Behav.* 1997; 38: 21-37.
- Imbahale, S. S., Fillinger, U., Githeko, A., Mukabana, W. R., & Takken, W. (2010). An exploratory survey of malaria prevalence and people's knowledge, attitudes and practices of mosquito larval source management for malaria control in western Kenya. *Acta Tropica*, 115(3), 248-256.
- Kandikattu, R. N., Singh, A. K., Mohan, S. K., & Joshi, A. (2017). Perception about home-based monitoring of blood pressure and blood sugar among urban and rural individuals. *Annals of Tropical Medicine and Public Health*, 10(1), 117
- Kearney, P. M., Whelton, M., Reynolds, K., Muntner, P., Whelton, P. K., & He, J. (2005). Global burden of hypertension: analysis of worldwide data. *The Lancet*, 365(9455), 217-223.
- Kumar, S. G., Unnikrishnan, B., & Nagaraj, K. (2013). Self-reported chronic diseases and occupational health risks among bank employees of southern Karnataka city, India. *Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine*, 38(1), 61.
- Kumar, S.V., Laxmi, A.N.R., Pasula, S., Adepu, K. Md. Mahamood, Md. A. (2013). Prevalence, awareness, and control of hypertension in school teachers in warangal, andhra pradesh, India. *Int J Biol Med Res.* 2013; 4(2) : 3247- 3249
- Lee et al (2019). Korean Society of Hypertension Guidelines for the Management of Hypertension: Part II- Diagnosis and Treatment of Hypertension. *Journal of Clinical Hypertension* (2019) 25:20 <https://doi.org/10.1186/s40885-019-0124-x>
- Mboera, L. E., Shayo, E. H., Senkoro, K. P., Rumisha, S. F., Mlozi, M. R., & Mayala, B. K. (2009). Knowledge, perceptions and practices of farming communities on linkages between malaria and agriculture in Mvomero District, Tanzania. *Acta tropica*, 113(2), 139-144.
- Mokdad, A. H. (2016). Global non-communicable disease prevention: Building on success by addressing an emerging health need in developing countries. *Journal of Health Specialties*, 4(2), 92.
- Motlagh, Z., Fazel, S., Chaman, R., Ghafari, S. R., Parisay, Z., Golabi, M. R., ... & Babouei, A. (2015). Knowledge, treatment, control, and risk factors for hypertension among adults in Southern Iran. *International journal of hypertension*, 2015. <http://dx.doi.org/10.1155/2015/897070>
- Noubani, A., Isma'eel, H., Sibai, A. M., Nasreddine, L., & Tamim, H. (2018). Prevalence, Awareness, and Control of Hypertension in Greater Beirut Area, Lebanon. *International journal of hypertension*, 2018. <https://doi.org/10.1155/2018/5419861>
- Ogah, O. S., Okpechi, I., Chukwuonye, I. I., Akinyemi, J. O., Onwubere, B. J., Falase, A. O., ... & Sliwa, K. (2012). Blood pressure, prevalence of hypertension and hypertension-related complications in Nigerian Africans: A review. *World journal of cardiology*, 4(12), 327.
- Onwuchekwa, A. C., & Chinenye, S. (2010). Clinical profile of hypertension at a University Teaching Hospital in Nigeria. *Vascular health and risk management*, 6, 511.
- Park, K. (2015). Park's Textbook of preventive and social medicine. 23<sup>rd</sup> edition. *M/s Banarasidas Bhanot Publishers, Jabalpur (MP) India*, 640, 372-377.
- World Health Organization (2009). *Global Health Risks: Mortality and Burden of*

Disease attributable to selected major Risks with Hypertension in Rukungiri District, Uganda- a Community-based Study Geneva: WHO Press; 2009. 9-12. *Afri Health Sci.* 2009;9(3):153-160

World Health Organization (2013). A global brief on Hypertension: Silent Killer, Global Public Health Crisis Retrieved from: [http://ish-world.com/downloads/pdf/global\\_brief\\_hypertension.pdf](http://ish-world.com/downloads/pdf/global_brief_hypertension.pdf)