



KNOWLEDGE OF HYPERTENSION AMONG PRIMARY SCHOOL TEACHERS IN GWOZA LOCAL GOVERNMENT AREA, BORNO STATE, NIGERIA

Bitrus Joseph¹; Oteikwu Solomon²; Audu Emmanuel Owoicho³; Soma Priston Williams⁴

1;2; Department of Physical and Health Education University of Maiduguri, Nigeria.

3: Federal University of Education Pankshin

4: Nandi Azikiwe University, Anambara State, Nigeria.

Abstract

Hypertension is one of the leading causes of morbidity and mortality worldwide and constitutes a major public health challenge, particularly in developing countries. Adequate knowledge of hypertension is essential for its prevention, early detection, and effective management. This study assessed the knowledge of hypertension among primary school teachers in Gwoza Local Government Area, Borno State, Nigeria. A cross-sectional descriptive survey design was adopted. The study population comprised 953 primary school teachers, from which a sample of 219 respondents was selected using proportionate and simple random sampling techniques. Data were collected using a researcher-developed questionnaire consisting of 9 items measured on a five-point Likert scale. The instrument was validated by experts and demonstrated satisfactory reliability. Data were analyzed using descriptive statistics (frequency, percentage, mean, and standard deviation), while an independent-samples t-test was used to test the hypothesis at the 0.05 level of significance. The findings revealed that the respondents demonstrated good knowledge of hypertension, particularly regarding its causes, risk factors, prevention, and complications. Furthermore, there was no statistically significant difference in the knowledge of hypertension between male and female teachers ($t(198) = 0.415, p = 0.678$). The study concluded that primary school teachers in Gwoza Local Government Area possess good knowledge of hypertension. The study recommends regular health education programs, routine blood pressure screening, and workplace wellness initiatives to sustain and further improve teachers' knowledge and healthy lifestyle practices.

Keywords: Hypertension, Knowledge, Primary School Teachers, Gwoza, Borno State.

Introduction

Hypertension is one of the most prevalent non-communicable diseases (NCDs) and remains a major global public health challenge due to its significant contribution to morbidity, disability, and premature mortality. It is defined as a persistent elevation of arterial blood pressure to levels that increase the risk of cardiovascular and renal complications. According to the World Health Organization (WHO, 2023), hypertension is diagnosed when systolic blood pressure is consistently 140 mmHg or higher and/or diastolic blood pressure is 90 mmHg or higher on repeated clinical measurements. The condition is recognized as one of the leading modifiable risk factors for cardiovascular diseases, including coronary artery disease, stroke, heart failure, peripheral vascular disease, chronic kidney disease, and premature death (Whelton, Carey, Aronow, Casey, Collins, Dennison Himmelfarb, Smith, Spencer, Stafford, Taler, Thomas, Williams, Williamson, and Wright, 2018). Because hypertension often progresses without obvious symptoms until serious complications develop, it has earned the description of a "silent killer" (World Health Organization, 2023).



Globally, hypertension affects individuals across all age groups and socioeconomic categories, although its prevalence is particularly high among adults and older populations. The World Health Organization (2023) estimates that approximately 1.28 billion adults aged 30–79 years are living with hypertension worldwide, with nearly two-thirds residing in low- and middle-income countries. Despite remarkable advances in medical diagnosis, pharmacological treatment, and public health interventions, hypertension continues to impose an enormous burden on health systems because many affected individuals remain undiagnosed, untreated, or inadequately controlled.

Zhou, Carrillo-Larco, Danaei, Riley, Paciorek, Stevens, Gregg, Bennett, Solomon, Singleton, Sophiea, Iurilli, Lhoste, Cowan, Savin, Woodward, Balanova, Cifkova, and Ezzati (2021) reported that although awareness and treatment of hypertension have improved globally over the last three decades, control rates remain unsatisfactory in many developing countries.

The increasing prevalence of hypertension has been attributed to rapid urbanization, population ageing, unhealthy dietary habits, excessive dietary salt intake, obesity, physical inactivity, tobacco smoking, harmful alcohol consumption, psychological stress, and genetic predisposition (Whelton, 2018; World Health Organization, 2023). In many developing countries, changing lifestyles and socioeconomic transitions have accelerated exposure to these risk factors, thereby increasing the burden of hypertension and other non-communicable diseases. Consequently, hypertension has become one of the foremost contributors to disability-adjusted life years (DALYs) and avoidable healthcare expenditure worldwide (Zhou, 2021).

The public health significance of hypertension extends beyond its direct effects on cardiovascular health because it contributes substantially to reduced productivity, increased healthcare costs, diminished quality of life, and socioeconomic hardship among affected individuals and families. Uncontrolled hypertension frequently results in debilitating complications such as stroke, myocardial infarction, chronic kidney disease, visual impairment, and heart failure, all of which require long-term medical care and place enormous financial burdens on households and national health systems (World Health Organization, 2023).

Whelton, Carey, Aronow, Casey, Collins, Dennison Himmelfarb, Smith, Spencer, Stafford, Taler, Thomas, Williams, Williamson, and Wright (2018) emphasized that effective prevention through lifestyle modification, regular blood pressure screening, early diagnosis, and prompt treatment remains the most cost-effective strategy for reducing the global burden of hypertension. Consequently, improving public knowledge and awareness of hypertension has become a major priority for governments, healthcare professionals, and international organizations seeking to reduce the growing burden of cardiovascular diseases and improve population health outcomes. Sub-Saharan Africa has experienced one of the fastest increases in the prevalence of hypertension over the past three decades, making non-communicable diseases a growing public health concern in the region. The rapid epidemiological transition from communicable diseases to chronic non-communicable diseases has been driven by urbanization, population growth, unhealthy dietary patterns, reduced physical activity, obesity, excessive alcohol consumption, tobacco use, and socioeconomic changes (World Health Organization, 2023; Zhou, Carrillo-Larco, Danaei, Riley, Paciorek, Stevens, Gregg, Bennett, Solomon, Singleton, Sophiea, Iurilli, Lhoste, Cowan, Savin, Woodward, Balanova, Cifkova, and Ezzati, 2021). Despite the increasing burden of hypertension, awareness, diagnosis, treatment, and blood pressure control remain inadequate across many African countries because of poor access to healthcare services, limited health education, poverty, and weak healthcare systems (World Health Organization, 2023). Consequently, hypertension



contributes substantially to cardiovascular diseases, disability, and premature mortality across the continent.

Nigeria is not exempt from this growing public health challenge. The prevalence of hypertension has continued to rise among both urban and rural populations due to rapid lifestyle changes, increasing consumption of processed foods, excessive dietary salt intake, obesity, sedentary behavior, occupational stress, and inadequate preventive healthcare practices (Opara and Maduka, 2020; Nwevo, Nkang, Nwilegbara, Okonkwo, Otu, and Ameh, 2024). In addition, many Nigerians remain unaware of their hypertension status because routine blood pressure screening is not widely practiced, especially in underserved communities. Mgbahurike and Lelesi (2022) observed that although awareness of hypertension has improved among educated populations, misconceptions regarding its causes, symptoms, treatment, and prevention still exist. Such misconceptions often delay diagnosis, reduce adherence to recommended treatment, and increase the likelihood of severe complications.

Knowledge of hypertension is widely recognized as an important determinant of preventive health behavior. Individuals with adequate knowledge are more likely to recognize the disease as a preventable chronic condition, identify its risk factors, participate in routine blood pressure screening, adopt healthier lifestyles, comply with medical advice, and seek timely healthcare services when necessary (Adebanjo, Oluwasanu, and Arulogun, 2019; Okafor, Nnadi, and Onwuchuluba, 2024). Conversely, inadequate knowledge may encourage unhealthy behaviors such as excessive salt consumption, physical inactivity, tobacco use, and delayed health-seeking behavior, thereby increasing the risk of uncontrolled hypertension and its complications. Health education therefore remains one of the most effective strategies for reducing the burden of hypertension through improved awareness and behavioral change (World Health Organization, 2023).

Teachers represent an important occupational group because they play a significant role in shaping the knowledge, attitudes, and health behaviors of school children and members of the wider community. As educators and role models, teachers are well positioned to promote healthy lifestyles and encourage preventive health practices among learners. However, the teaching profession is associated with several occupational hazards, including prolonged standing, heavy workloads, emotional demands, administrative responsibilities, limited opportunities for physical exercise, and psychological stress, all of which may increase susceptibility to hypertension (Opara and Maduka, 2020; Okolosi, Chukwuka, Ilo, Solana, Fakile, and Uthman-Akinhanmi, 2024). Empirical studies among teachers in Nigeria have produced varying findings regarding knowledge of hypertension. Opara and Maduka (2020) reported that although many teachers possessed satisfactory knowledge of hypertension, several were exposed to modifiable cardiovascular risk factors such as obesity and physical inactivity. Similarly, Oyelade and Amosu (2021) found that knowledge significantly predicted hypertension prevention practices among secondary school teachers in Oyo State, while Adebanjo, Oluwasanu, and Arulogun (2019) reported that improved knowledge enhanced willingness to engage in blood pressure self-monitoring. Furthermore, Anyakorah, Innocent, Ezenwa, Nwaokoro, and Emina (2026) observed that university academic staff demonstrated good knowledge and positive perceptions regarding hypertension, emphasizing the importance of continuous health education in improving preventive practices among working populations.

Borno State, particularly Gwoza Local Government Area, has experienced prolonged insurgency, insecurity, displacement of populations, destruction of healthcare infrastructure, and disruption of



educational services over the past decade. These challenges have adversely affected access to quality healthcare, routine medical screening, and health promotion programmes among residents. Consequently, many individuals, including teachers, may have limited opportunities to receive adequate health education on non-communicable diseases such as hypertension. Poor access to healthcare services may also contribute to delayed diagnosis, poor treatment adherence, and increased risk of hypertension-related complications (World Health Organization, 2023). In addition, prolonged exposure to psychosocial stress resulting from insecurity, economic hardship, and occupational demands may further increase the vulnerability of teachers to hypertension and other cardiovascular diseases.

Primary school teachers occupy a strategic position in every society because they influence children's intellectual, behavioral, and social development during their formative years. Beyond their instructional responsibilities, teachers serve as health role models and are expected to promote healthy lifestyles among pupils, parents, and members of the wider community. Their level of knowledge regarding hypertension may therefore influence not only their personal health behaviors but also the quality of health information transmitted to school children and community members. Teachers with adequate knowledge of hypertension are more likely to adopt healthy dietary practices, participate in regular blood pressure screening, recognize early warning signs, encourage preventive behaviors, and seek prompt medical attention whenever necessary (Adebanjo, Oluwasanu, and Arulogun, 2019; Okafor, Nnadi, and Onwuchuluba, 2024). Consequently, improving teachers' knowledge represents an important public health strategy for reducing the burden of hypertension within schools and communities. Although several Nigerian studies have examined hypertension among teachers and other occupational groups, the available literature indicates that most investigations have concentrated on urban centers and relatively stable communities. For example, Opara and Maduka (2020) assessed obesity and hypertension among primary school teachers in South-South Nigeria, while Nwevo, Nkang, Nwilegbara, Okonkwo, Otu, and Ameh (2024) investigated the prevalence and associated factors of hypertension among schoolteachers in Calabar. Similarly, Okolosi, Chukwuka, Ilo, Solana, Fakile, and Uthman-Akinhanmi (2024) examined nutritional status and hypertension among teachers in Ogun State, whereas Oyelade and Amosu (2021) investigated knowledge as a predictor of hypertension prevention practices among teachers in Oyo State. Despite these valuable contributions, there remains limited empirical evidence regarding the knowledge of hypertension among primary school teachers in conflict-affected communities such as Gwoza Local Government Area of Borno State. This gap limits the availability of context-specific evidence needed for planning effective school-based health promotion programmes and workplace wellness interventions.

The present study was therefore undertaken to assess the knowledge of hypertension among primary school teachers in Gwoza Local Government Area, Borno State, Nigeria. Specifically, the study sought to determine the level of knowledge of hypertension among teachers and examine whether gender differences exist in their knowledge of the disease.

Objective of the Study

The objective of this study was to determine:

1. knowledge of hypertension among primary school teachers in Gwoza Local Government Area, Borno State, Nigeria.

Research Question

The study answered the research question:



1. What is the level of knowledge of hypertension among primary school teachers in Gwoza Local Government Area, Borno State, Nigeria?

Research Hypothesis

H₀₁: There is no statistically significant difference in the knowledge of hypertension between male and female primary school teachers in Gwoza Local Government Area, Borno State, Nigeria.

Methodology

A cross-sectional descriptive survey design was adopted for this study. The design was considered appropriate because it enabled the researcher to assess the existing level of knowledge of hypertension among primary school teachers at a single point in time without manipulating any study variables. The target population consisted of 953 public primary school teachers employed in Gwoza Local Government Area as obtained from the Borno State Universal Basic Education Board (BOSUBEB, 2023). A sample of 219 teachers was selected from the target population using proportionate sampling techniques. After data screening, 200 correctly completed questionnaires were retained and used for the final analysis. A multistage sampling procedure was employed. First, twenty-two (22) public primary schools were selected through simple random sampling from the list of all public primary schools in the Local Government Area. Thereafter, proportionate sampling was used to allocate the number of respondents selected from each school according to staff strength. Finally, simple random sampling was used to select individual teachers from each selected school. Data were collected using a researcher-developed questionnaire titled Knowledge of Hypertension among Primary School Teachers Questionnaire (KHPTQ). The questionnaire consisted of two sections. Section A elicited demographic information, while Section B contained nine items assessing respondents' knowledge of hypertension, including its nature, diagnosis, risk factors, prevention, and complications. Responses were rated on a five-point Likert scale ranging from Strongly Agree (SA) to Strongly Disagree (SD). The instrument was subjected to face and content validation by experts in Department of Physical and Health Education University of Maiduguri. The reliability of the instrument was established using the test-retest method. Twenty-five teachers from schools outside the study sample participated in the pilot study. The instrument was administered twice at an interval of three weeks, and the responses were analyzed using Cronbach's alpha. A reliability coefficient ranging from 0.78 to 0.85 was obtained, indicating satisfactory internal consistency. Permission to conduct the study was obtained from the relevant educational authorities. The researcher personally administered the questionnaires to the respondents with the assistance of trained research assistants. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to answer the research question. An independent-samples t-test was employed to test the hypothesis at the 0.05 level of significance.

Data Analysis and Results

Table 1: Demographic Characteristics of Respondents

Characteristics	N	%
Gender		
Male	125	62.5
Female	75	37.5
Age		
25-30 yrs	20	10.0



31-35 yrs	42	21.0
36-40 yrs	53	26.5
41-45 yrs	46	23.0
46-50 yrs	23	11.5
51 years and older	16	8.0
Educational Qualification		
NCE	169	84.5
Bsc.Ed./B.A.Ed	31	15.5
Marital Status		
Single	28	14.0
Married	158	79.0
Divorced	8	4.0
Widow/Widower	6	3.0
Rank		
Classroom Teacher	157	78.5
Assistant Head Teacher	22	11.0
Head Teacher	21	10.5
Years of work experience		
10-20yrs	73	36.5
21-30yrs	99	49.5
31-40yrs	28	14.0

Table 1 shows the demographic characteristics of respondents. Males comprise 125 (62.5%), while females comprise 75 (37.5%). Respondents aged 25–30 years, 20 (10.0%). 31-35 years, 42 (21.0%) 36–40 years, 53 (6.5%) 41-45 years 46 (23.0%). 46–50 years (11.5%). 51 years and older (8.0%). Educational qualification: NCE 169 (84.5%). Bsc.Ed./B.A.Ed. 31 (15.5%). Marital Status, Single 28 (14.0%), Married 158 (79.0%), Divorced 8 (4.0%), and Widow/Widower 6 (3.0%). Rank: Classroom Teacher 157 (78.55%), Assistant Head Teacher 22 (11.0%), Head Teacher 21 (10.5%). Years of working experience: 10–20 years: 73 (36.5%), 21–30 years: 99 (49.5%), 31–40 years: 28 (14.0%).

Research Question: 1. What is the level of knowledge of hypertension among primary school teachers in Gwoza Local Government Area, Borno State, Nigeria?

Table 2: Statistical Distribution of responses on Knowledge of Hypertension among Primary School Teachers in Gwoza Local Government Area of Borno State.

Items Statement	SA n%	A n%	UD n%	D n%	SD n%	Mean	Std. Dev
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Hypertension is often called a silent killer because it has no warning signs or symptoms.	92(46)	77(38.5)	13(6.5)	10(5)	8(4)	1.82	1.02
Hypertension is a non-communicable disease.	86(43)	77(38.5)	12(6)	15(7.5)	10(5)	1.93	1.11
Blood pressure can be measured using a monitor placed on the arm	80(40)	92(46)	8(4)	11(5.5)	9(4.5)	1.88	1.02
Hypertension is medical condition and is not caused by and evil.	83(41)	74(37)	14(7)	21(10.5)	8(4)	1.98	1.12
Low fruit and vegetable consumption can lead to hypertension.	86(4.3)	85(42.5)	11(5.5)	13(6.5)	5(2.5)	1.83	.973
Normal blood pressure for a person is 120/80 mmHg.	101(50.5)	78(39)	5(2.5)	11(5.5)	5(2.5)	1.70	.945
Uncontrolled hypertension can cause kidney failure.	94(47)	89(44.5)	8(4)	6(3)	3(1.5)	1.68	.814
Persistent severe headache may be associated with high blood pressure	97(48.5)	86(43)	5(2.5)	8(4)	4(2)	1.68	.867
Untreated hypertension can lead to death.	88(44)	98(49)	6(3)	5(2.5)	3(1.5)	1.68	.780

The aggregate mean M is 1.8000 (SD =.31209).

Table 2 shows the number and percentage of respondents' responses, indicating levels of agreement with each item statement of the respondent's knowledge about hypertension. Hypertension is often called a silent killer because it has no warning sign and symptom. 92 (46%) of respondents) strongly agree. 77 (38.5%) respondents agreed, 13 (6.5%) respondents were undecided, 10 (5%) respondents disagreed, and 8 (4%) respondents strongly disagreed. Hypertension is a non-communicable disease. 86 (43% of respondents) strongly agree. 77 (38.5%) respondents agree, 12 (6%) respondents were undecided, 15 (7.5%) respondents disagreed, and 10 (5%) respondents strongly disagreed. Blood pressure can be measured using a blood pressure monitor placed on the upper arm. 80 (40%) respondents strongly agree. There were 92 (46%) respondents who strongly agree, 8 (4%) who were undecided, 11 (5.5%) who disagree, and 9 (4.5%) who strongly disagree. 83 (41.5%) respondents strongly agree. Hypertension is a medical condition and is not caused by evil or supernatural forces. 74 (37% of respondents) agree, 14 (7%) were undecided, 21 (10.5% of respondents) disagreed, and 8 (4%) strongly disagreed. Low fruit and vegetable consumption can lead to hypertension. 86 (4.3%) respondents strongly agree. 85 (42.5%) respondents agreed, 11 (5.5%) respondents were undecided, 13 (6.5%) respondents



disagreed, and 5 (2.5%) respondents strongly disagreed. Normal blood pressure for a person is 120/80 mmHg. 101 (50.5%) respondents strongly agreed. 78 (39%) respondents agreed; 5 (2.5%) respondents were undecided; 11 (5.5%) respondents disagreed; and 5 (2.5%) respondents strongly disagreed. Uncontrolled hypertension can cause kidney failure. 94 (47%) respondents strongly agreed. 89 (44.5%) respondents agreed, 8 (4%) respondents were undecided, 6 (3%) respondents disagreed, and 3 (1.5%) respondents strongly disagreed. Persistent severe headache may be associated with high blood pressure. 97 (48.5%) respondents strongly agreed. 86 (43% of respondents) agree, 5 (2.5% of respondents) were undecided, 8 (4%) disagreed, and 4 (2%) respondents strongly disagreed. Untreated hypertension led to death; 88 (44% of respondents) strongly agreed. 98 (49%) respondents agree, 6 (3%) respondents were undecided, 5 (2.5%) respondents disagreed, and 3 (1.5%) respondents strongly disagreed.

Table 3: Independent Samples t-test on Knowledge of Hypertension among Primary School Teachers in Gwoza Local Government Area Borno State Based on Gender

Gender	Mean	SD	Sig	t	df	P
Male	1.7929	.30798	.308	.415	198	.678
Female	1.8119	.32056				

Table 3 shows that male teachers had a mean score of 1.79 (SD = 0.31), while female teachers had a mean score of 1.81 (SD = 0.32). The difference was not statistically significant, $t(198) = 0.415$, $p = .678$. Therefore, the null hypothesis was accepted, indicating that there was no significant difference in the knowledge of hypertension between male and female primary school teachers in Gwoza Local Government Area, Borno State.

Discussion

The findings of this study revealed that primary school teachers in Gwoza Local Government Area possessed good knowledge of hypertension. The majority of the respondents correctly identified hypertension as a non-communicable disease, recognized its major complications, and demonstrated awareness of preventive measures such as healthy eating and regular blood pressure monitoring. These findings suggest that the respondents have acquired adequate knowledge that could positively influence their health-seeking behaviors and lifestyle practices.

The findings are consistent with those of Oyelade and Ademola (2021), who reported that secondary school teachers in Ogbomoso North Local Government Area demonstrated good knowledge of hypertension and that knowledge significantly influenced preventive practices. Similarly, Opara and Maduka (2020) reported that primary school teachers possessed adequate knowledge of hypertension and its associated lifestyle-related risk factors.

The findings also agree with Anyakorah, P. E., Innocent, D. C., Ezenwa, C. J., Nwaokoro, J. C., & Emina, V. A. (2026). who found that university academic staff demonstrated good knowledge and perception of hypertension. The similarities among these studies may reflect increased public awareness through health education campaigns, healthcare services, and media dissemination of information on non-communicable diseases. The study further revealed that there was no statistically significant difference in knowledge between male and female teachers. This finding suggests that both sexes have comparable access to health information and opportunities to acquire knowledge regarding hypertension. Consequently, health promotion programs targeting teachers should be implemented without gender bias.



Conclusion

The study concludes that primary school teachers in Gwoza Local Government Area, Borno State, possess good knowledge of hypertension. The respondents demonstrated adequate understanding of hypertension, including its causes, risk factors, diagnosis, prevention, and complications. Furthermore, no statistically significant difference was observed between male and female teachers' knowledge of hypertension. Continuous health education and workplace health promotion programs are recommended to sustain the existing level of knowledge and encourage healthy lifestyle behaviors among teachers.

References

- Adebanjo, M. A., Oluwasanu, M. M., & Arulogun, O. S. (2019). Hypertension knowledge and willingness of government officials in a Southwestern Nigerian city to self-monitor blood pressure. *Journal of Primary Prevention*, 40(1), 85–99. <https://doi.org/10.1177/0272684X19857431>
- Anyakorah, P. E., Innocent, D. C., Ezenwa, C. J., Nwaokoro, J. C., & Emina, V. A. (2026). Knowledge and perception of hypertension among academic staff of Federal University of Technology Owerri, Imo State, Nigeria. *Discover Public Health*, 23, 402.
- Borno state universal Basic Education Board, BOSUBEB(2023)
- Mgbahurike, A. A., & Lelesi, T. N. (2022). Knowledge, attitude and perception of hypertension among staff of a tertiary institution in Nigeria. *Universal Journal of Pharmaceutical Research*, 7(1), 27–32. <https://doi.org/10.22270/ujpr.v7i1.719>
- Nwevo, C. O., Nkang, J., Nwilegbara, S., Okonkwo, U., Otu, A., & Ameh, S. (2024). Prevalence of hypertension and associated factors among schoolteachers in Calabar, Nigeria: A cross-sectional study. *Nigerian Journal of Clinical Practice*, 27(7), 850–858. https://doi.org/10.4103/njcp.njcp_1_24
- Okafor, U., Nnadi, I. K., & Onwuchuluba, E. E. (2024). The role of knowledge and perception of hypertension in adherence to drug therapy among hypertensive adults in Lagos, Nigeria: A cross-sectional study. *Journal of Current Biomedical Research*, 4(3), 1663–1682. <https://doi.org/10.54117/jcbr.v4i3.5>
- Okolosi, J., Chukwuka, O., Ilo, J., Solana, O., Fakile, O., & Uthman-Akinhanmi, Y. (2024). Nutritional status and prevalence of hypertension among teachers in Yewa North Local Government, Ogun State, Nigeria. *International Journal of Allied Health Sciences*, 8(2), 3059–3066.
- Opara, C. J., & Maduka, O. (2020). An evaluation of obesity and hypertension among primary school teachers in an urban region of South-South Nigeria. *Journal of Hypertension and Management*, 6, 050. <https://doi.org/10.23937/2474-3690/1510050>
- Oyelade, B. O., & Amosu, A. (2021). Knowledge as a predictor of hypertension prevention practices among secondary school teachers in a selected Local Government Area in Oyo State, Nigeria. *International Journal of Public Health and Pharmacology*, 1(1), 62–73.
- Whelton, P. K., Carey, R. M., Aronow, W. S., Casey, D. E., Collins, K. J., Dennison Himmelfarb, C., ... Wright, J. T., Jr. (2018). A guideline for the prevention, detection, evaluation, and management of high blood pressure in adults. *Hypertension*, 71(6), e13–e115. <https://doi.org/10.1161/HYP.065>
- World Health Organization. (2023). Hypertension. Geneva, Switzerland: World Health Organization.



Zhou, B., Carrillo-Larco, R. M., Danaei, G., Riley, L. M., Paciorek, C. J., Stevens, G. A., Ezzati, M., & NCD Risk Factor Collaboration. (2021). Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: A pooled analysis of 1,201 population-representative studies with 104 million participants. *The Lancet*, 398(10304), 957–980. [https://doi.org/10.1016/S0140-6736\(21\)01330-1](https://doi.org/10.1016/S0140-6736(21)01330-1)

