Acta Scientific NUTRITIONAL HEALTH (ISSN:2582-1423)

Volume 9 Issue 7 July 2025

Research Article

Lifestyle Modification among Hypertension Patients in Obafemi Awolowo University Teaching Hospital, Ile-Ife

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DOI: 10.31080/ASNH.2025.09.1544

Received: June 03, 2025

Published: June 18, 2025

Abstract

Hypertension remains a leading contributor to cardiovascular morbidity and mortality worldwide. This cross-sectional study at Obafemi Awolowo University Teaching Hospital (OAUTH), Ile-Ife, Nigeria, surveyed 303 hypertensive patients to assess socio-demographics, knowledge and practices around hypertension management, and lifestyle modification. 66.01 % of respondents were male; most (79.20 %) were aged 31–65 years. While 40.60 % correctly identified elevated diastolic/systolic readings as hypertension, misconceptions persisted: 49.50 % incorrectly believed frying was suitable, and only 33.00 % selected boiling/grilling as preferable cooking methods. Regular exercise was reported by 34.03 %, and 65.97 % did not engage in any. Smoking was prevalent (66.01 %), and 53.80 % consumed >2 alcoholic drinks/day. Medication non-adherence was common: 42.90 % frequently or always forgot doses. These findings underscore critical gaps in patients' knowledge and practices. We recommend implementing tailored educational interventions-incorporating brief motivational interviewing, integrated smoking-cessation and alcohol-reduction counseling, and adherence support tools (e.g. pillboxes, SMS reminders)-to improve blood pressure control and reduce cardiovascular risk.

Keywords: Hypertension; Modification; Patient; Education

Introduction

Hypertension, characterized by persistently elevated blood pressure levels, remains a significant public health concern globally [15]. In Nigeria, the burden of hypertension is substantial, contributing to the rising tide of non-communicable diseases (NCDs) and posing significant challenges to healthcare systems [9]. Within this landscape, the focus on dietary compliance and lifestyle modification among hypertension patients emerges as a critical area for research and intervention. Obafemi Awolowo University Teaching Hospital, located in Ile Ife, Osun State, Nigeria, stands as a pivotal institution in addressing the healthcare needs of the region, including hypertension management. Understanding the factors influencing dietary compliance and lifestyle modification among hypertension patients within this setting holds immense importance for improving patient outcomes and reducing the burden of hypertension-related complications [16].

This research endeavors to delve into the multifaceted aspects that impact dietary compliance and lifestyle modification among hypertension patients. By examining socio-demographic factors,

cultural influences, economic constraints, healthcare accessibility, and patient perceptions, the study aims to elucidate the complexities surrounding adherence to dietary and lifestyle recommendations [4]. Furthermore, the research seeks to explore the role of healthcare providers in facilitating and supporting patients in their journey towards adopting healthier dietary patterns and lifestyle modifications [17].

Understanding the interactions between healthcare professionals and patients can provide valuable insights into effective strategies for patient education, motivation, and sustained behavior change [18]. The findings of this research are anticipated to contribute significantly to the development of tailored interventions and healthcare policies aimed at enhancing dietary compliance and promoting lifestyle modifications among hypertension patients [12]. Ultimately, the overarching goal is to empower patients with the knowledge, skills, and support necessary to effectively manage their hypertension and improve their overall quality of life. In collaboration with healthcare providers, policymakers, and community stakeholders, this research endeavors to pave the way towards a healthier future for hypertension patients in the Osun State region, fostering a culture of proactive management and prevention of NCDs.

The background to this study is shaped by the recognition of the intricate interplay of factors influencing dietary compliance and lifestyle modification among hypertension patients in the OAUTH setting. Socio-economic factors, cultural beliefs, healthcare access, patient education, and individual perceptions all contribute to the complexity of adherence to dietary and lifestyle recommendations.

Research Methodology

Area of study

The research assessment of factors influencing dietary compliance and lifestyle modification among hypertension patients was conducted at the Obafemi Awolowo University Teaching Hospital Complex, situated in Ile Ife, Osun State. Established in 1967, the hospital serves as a tertiary healthcare institution and is closely affiliated with the Obafemi Awolowo University, Ile Ife. This prestigious teaching hospital provides comprehensive medical services and serves as a hub for medical education, research, and healthcare delivery in the region. With its state-of-the-art facilities and multidisciplinary healthcare team, the hospital offers an ideal setting for investigating the complex interplay of factors influencing dietary compliance and lifestyle modification among hypertension patients.

Obafemi Awolowo University Teaching Hospital Complex in Ile Ife, Osun State, encompasses several departments, each playing a vital role in the provision of specialized healthcare services, medical education, and research. Among these departments are.

Department of Medicine, Department of Cardiology, Department of Nutrition and Dietetics, Department of Community Health, Department of Psychiatry, Department of Physiotherapy and Department of Pharmacy. These departments work collaboratively within the Obafemi Awolowo University Teaching Hospital Complex to provide holistic care to hypertension patients, addressing medical, nutritional, psychological, and social aspects of their health needs.

Research design

A cross sectional descriptive method was used to carry out this study. This method entails the collection and presentation of data to give a clear picture of a particular situation. A well-structured questionnaire was used in collecting data.

Population of the Study

The target populations of this study comprised of all hypertensive patients aged 18 and above who are currently receiving care or treatment at the hospital. According to an extensive review of Hospital records by the time of this study, hypertensive patients aged 18 and above currently receiving care at the hospital are 1250 in number (Hospital Medical Record).

Sampling and Sample Size

The researcher used Taro Yamane (1967) formula: SS = N/ [1 + N (e) ^{2}] to determine the sample size of 1250 at 0.05% degree of precision.

SS = Sample Size

N = Population of Study (1250)

E = Acceptable sampling error (0.05)

1 = Constant

SS= 1250/ (1+1250(0.05)^2

= 303.03 approx 303.

Sampling technique

Multi-Stage Sampling was utilized

- **1st Stage:** Stratified Sampling technique will be used to divide the population in to several strata ranging from categories like; age, gender, religion, tribe, etc.
- **2nd Stage:** Simple Random Sampling technique will be used to select respondents from each stratum.

Instrument for data collection

The instrument for data collection in this study comprises questionnaires developed by the researcher. These questionnaires are structured into different sections, each focusing on specific areas of interest. The first section collects socio-demographic data, including participants' age, gender, religion, tribe, educational status, occupation, marital status, and average monthly income.

The second section assesses participants' knowledge levels regarding hypertension and its treatment using a modified hypertension knowledge-level scale (HK-LS). The third section explores participants' knowledge about lifestyle modification strategies for managing hypertension.The questionnaires employ a combination of closed-ended questions and Likert scale items to efficiently collect data while capturing a wide range of information relevant to the research objectives.

Ethical clearance

The researcher in the course of the study respected the code that governs conducting a research project. The respondents were adequately informed prior to data collection and were commended after the data collection. The researcher made sure that respondent did not write their names to maintain anonymity and also ensured that all information gotten from the respondents were kept confidential. Plagiarism was not practiced; all the authors whom their materials was used was properly cited.

Method of data collection

Data was collected through questionnaires. The questionnaires was distributed to the respondents by the researcher and her research assistant via scheduled meeting with them after appropriate permission has been obtained by the necessary authorities in the hospital. The nurses in the hospital too helped to distribute and explain the questionnaires to the less learned patients during the course of this study.

Method of data analysis

Data was Cleaned, Coded and entered into the system using statistical package for social sciences (SPSS) version 25.0. Data analysed was presented in tables and charts.

Results

Variables	Frequency	Percentage %
Age in years (at last birthday)		
18-30 years old	60	19.80%
31-50 years old	80	26.40%
51-65 years old	100	33.00%
66-80 years old	63	20.80%
Gender:		
Male	200	66%
Female	103	34%
Tribe		
Yoruba	88	29.05%
Igbo	70	23.10%
Hausa	80	26.40%
Others	63	21.45%
Educational status		
No formal education	60	19.80%
Primary	43	14.20%
Secondary	70	23.10%
Tertiary	80	26.40%
Post graduate	50	16.50%
Occupation		
Self Employed	113	37.30%
Government Employed	10	33%
Unemployed	90	29.70%
Marital status		
Single	60	19.80%
Married	83	27.40%
Divorced	70	23.10%
Widowed	90	29.70%
Total	303	100 (100%)

Table 1: Showing the demographic data of the respondents.

The demographic table offers a detailed snapshot of the study participants' characteristics across various categories. From the age distribution, it's apparent that the majority of participants fall within the middle-aged to older adult range, with the largest proportion falling between 31 to 65 years old, constituting about 79.20% of the total sample. Notably, participants aged 51 to 65 years make up the largest age group, comprising 33.00% of the sample, indicating a significant representation of individuals in this age bracket.

In terms of gender, there is a clear dominance of males, who make up 66% of the total participants, while females account for the remaining 34%. This skew towards male participants may have implications for gender-related analyses and considerations within the study. Regarding tribal distribution, the Yoruba tribe emerges as the most represented, comprising 29.05% of the participants, followed closely by the Hausa tribe at 26.40%, the Igbo tribe at 23.10%, and other ethnic groups making up 21.45% collectively. This diverse ethnic composition reflects the multicultural nature of the study population. Educationally, participants with tertiary education form the largest group at 26.40%, followed by those with secondary education at 23.10%. However, a notable proportion of participants have no formal education, accounting for 19.80% of the sample, indicating a wide range of educational backgrounds among the participants. Occupationally, self-employed individuals constitute the largest proportion at 37.30%, followed by government-employed individuals at 33%, while approximately 29.70% of participants are unemployed. This distribution sheds light on the diverse occupational status of the study participants. Regarding marital status, married individuals represent the largest group at 27.40%, followed closely by widowed individuals at 29.70%. Divorced individuals account for 23.10% of the sample, while single individuals make up 19.80%. This diverse marital status distribution reflects the varied relationship statuses of the study participants. Overall, the demographic table provides valuable insights into the characteristics of the study population, offering a foundation for understanding the sample composition and its implications for the research findings.

S/N	Modified hypertension Knowledge-Level Scale (HK-LS)	Yes	No	Don't Know
9.	High diastolic or systolic blood pressure indicates increased blood pressure?	123, 40.6%	100, 33.0%	80,26.4%
10	Increased diastolic blood pressure also indicates increased blood pressure?	163, 53.80%	90, 29.70%	50, 16.50%
11.	Increased blood pressure is the result of aging, so treatment is unnecessary?	110, 36.30%	123, 40.60%	70 , 23.10%
12	If the medication for increased blood pressure can control blood pressure there is no need to change lifestyles?	80, 26.40%,	95, 31.35%	128, 42.25%
13.	If individuals with increased blood pressure change their lifestyles, there is no need for treatment?	60, 19.80%	99, 32.67%	144, 47.53%
14.	Individuals with increased blood pressure must take their medication must take their medication as prescribed?	83, 27.40%	110, 36.30%	110, 36.30%
15.	Drugs for increased blood pressure must be taken every day?	100, 33.00%	75, 24.75%	128, 42.24%
16.	Individuals with increased blood pressure must take their medication only when they feel ill?	120, 39.60%	70, 23.10%	113, 37.30%
17	Individuals with increased blood pressure must take their medication throughout their life?	130, 42.90%	88, 29.04%	85, 28.04%

Table 2: Showing the Knowledge about Hypertension and its Treatment.

The data from Table 2 paints a picture of varying levels of understanding and misconceptions among patients regarding hypertension and its treatment.

A significant proportion of respondents recognize that high diastolic or systolic blood pressure indicates increased blood pressure (40.6%), while a notable percentage are uncertain (33%) or believe otherwise (26.4%). Similarly, a majority correctly understand that increased diastolic blood pressure signifies increased blood pressure (53.8%), though a considerable portion are unsure (29.7%) or disagree (16.5%). There's a misconception among a portion of respondents (36.3%) that increased blood pressure is solely a result of aging, leading to the belief that treatment is unnecessary. However, a significant proportion either disagrees (40.6%) or is uncertain (23.1%). Regarding treatment approaches, there's a mix of beliefs. Some respondents (26.4%) think medication alone is sufficient to control blood pressure without lifestyle changes, while others are uncertain (31.35%) or disagree (42.25%). Similarly, there's confusion about the necessity of lifestyle changes alongside medication, with some believing lifestyle changes alone can negate the need for treatment (19.8%), while others are unsure (32.67%) or disagree (47.53%). Misconceptions also extend to medication adherence. While a portion of respondents (27.4%) believe that medication alone is enough, others are uncertain (36.3%) or disagree (36.3%). There's also confusion about the frequency of medication intake, with some believing it should only be taken when feeling ill (39.6%), while others are unsure (23.1%) or disagree (37.3%). Finally, a significant percentage (42.90%) believes that Individuals with increased blood pressure must take their medication throughout their life, while (29.04%) don't, on the other hand (28.04%) of the respondents are uncertain about this.

S/N		Yes	No
	For individuals with increased blood pressure, the best cooking method is frying?	150, 49.50%	153, 50.50%
	For individuals with increased blood pressure, the best cooking method is boiling or grilling?	100, 33.00%	203, 67.00%
	Individuals with increased blood pressure can eat salty foods as long as they take their drugs regularly?	120, 39.60%,	183, 60.40%
	Individuals with increased blood pressure must eat fruits and vegetables frequently?	140, 46.20%	163, 53.80%
	The best type of meat for individuals with increased blood pressure is red meat?	90, 29.70%	213, 70.30%
	The best type of meat for individuals with increased blood pressure is white meat?	110, 36.30%	193, 63.70%
	Individuals with increased blood pressure must not smoke?	173, 57.10%	130, 42.90%
	Individuals with increased blood pressure can drink alcoholic beverages?	143, 47.20%	160, 52.8%
	Being overweight can likely lead to developing high blood pressure?	180, 59.41%	123, 40.59%

Table 3: Showing Knowledge about Lifestyle Modification.

For individuals with increased blood pressure, opinions on dietary and lifestyle factors vary When it comes to cooking methods, 150 respondents (49.50%) prefer frying, while 153 respondents (50.50%) do not. Boiling or grilling is favored by 100 respondents (33.00%), while 203 respondents (67.00%) disagree Regarding dietary choices, 120 respondents (39.60%) believe consuming salty foods is acceptable with regular medication, and 183 respondents (60.40%) disagree. 140 respondents (46.20%) advocate for frequent intake of fruits and vegetables, while 163 respondents (53.80%) do not. However, 90 respondents (29.70%) suggest red meat, while 213 respondents (70.30%) recommend against it. Conversely, 110 respondents (36.30%) recommend white meat, while 193 respondents (63.70%) disagree In terms of lifestyle habits, 173 respondents (57.10%) assert that individuals with high blood pressure should not smoke, while 130 respondents (42.90%) believe smoking is acceptable. 143 respondents (47.20%) believe alcoholic beverages are acceptable, while 160 respondents (52.8%) disagree On the topic of weight management, 180 respondents (59.41%) agree that being overweight can lead to high blood pressure, while 123 respondents (40.59%) disagree. In terms of exercise, 200 respondents (65.97%) believe it can reduce blood pressure, while 103 respondents (34.03%) disagree. (Table 4)

Question and Response	n	% of N = 303	Note
Q1. How many times do you eat in a day?			
(a) Once	60	19.80	
(b) 1–2 times	75	24.75	
(c) 3–4 times	91	30.03	
(d) 4 times and above	77	25.41	
Q2. What do you eat between meals?*(multiple answers permitted)a*			a
(a) Snack	120	39.60	a
(b) Fruits	83	27.39	a
(c) Another meal	110	36.30	a
(d) Nothing	90	29.70	a
Q3. How often do you eat fruits?			
(a) Daily	53	17.49	
(b) When available	98	32.34	
(c) 2–3 times a day	85	28.05	
(d) Per meal	67	22.12	
Q4. How often do you eat vegetables?			
(a) Per meal	45	14.85	
(b) Daily	60	19.80	
(c) When available	98	32.34	
(d) Rarely	100	33.00	
Q5. Do you peel the skin of poultry foods?			
(a) Yes	90	29.70	
(b) No	90	29.70	
(c) Not always	123	40.59	
Q6. How often do you eat out?(sandwiches, fast food, etc.)			
(a) Less than once a week	53	17.49	
(b) Once or twice a week	110	36.30	
(c) Three meals per week or more	140	46.21	

Table 4: Practice of Lifestyle Modification (Diet Section).

^a Respondents could select more than one option; percentages are of total N=303.

Across these 303 hypertensive patients, meal frequency is fairly evenly distributed: most (30.0 %) eat 3–4 times daily, with the remainder split between once (19.8 %), 1–2 times (24.8 %), and more than four times (25.4 %). Between meals, snacking is the most common behavior (39.6 %), though many also report eating another light meal (36.3 %) or nothing (29.7 %); fruits are chosen by 27.4 % (multi-response). Despite nearly one in five reporting daily fruit intake (17.5 %), availability rather than habit drives consumption for a further third (32.3 %), and only 28.1 % reach 2–3 servings; about 22.1 % have fruits strictly at mealtimes. Vegetable intake shows a similar pattern: one-third (33.0 %) consume vegetables only rarely, while 32.3 % eat them when available, 19.8 % daily, and just 14.9 % include them every meal. Practices around poultry preparation are split-roughly 30 % always peel skins, 30 % never do, and 40.6 % do so inconsistently. Eating out is common: nearly half (46.2 %) dine out three or more times weekly, over a third (36.3 %) do so once or twice, and fewer than one in five (17.5 %) eat out less than once a week.

1.	Do you engage in exercise?	(a) Yes 103, 34.03%	(b) NO 200, 65.97%		
2.	How many times a week do you exercise for at least 30 minutes?	(a)5-7 times a week 70, 23.10%	(b) 4times a week 65, 21.45%	(c)2-3 times a week 78, 25.74%	(d) < once a week 90, 29.70%

Table 5: Showing Exercise/Rest section.

Table 5 focuses on the practice of lifestyle modification, particularly in the realm of exercise among hypertensive patients, several key insights emerge. When asked about their engagement in exercise, 103 respondents (34.03%) responded affirmatively, while the majority, 200 respondents (65.97%), indicated that they do not engage in regular exercise.

For those who do exercise, the frequency varies. Twenty-three point one percent (70 respondents) exercise 5-7 times a week, 21.45% (65 respondents) exercise 4 times a week, 25.74% (78 respondents) exercise 2-3 times a week, and 29.70% (90 respondents) exercise less than once a week or never.

Question and Response	n	% of N=303	Note
Q1. Do you smoke?			
(a) Yes	200	66.01	
(b) No	103	33.99	
Q2. If yes, what do you smoke?*(multiple answers permitted; % of smokers)*a			a
(a) Cigarettes	120	60.00	a
(b) Marijuana	70	35.00	a
(c) Weed	65	32.50	a
(d) Cocaine	78	39.00	a
Q3. Quantity of smoking per day*(smokers only; single response)*			
(a) 1–2 sticks	60	30.00	
(b) 3–4 sticks	70	35.00	
(c) 5–6 sticks	40	20.00	
(d) 7+ sticks	30	15.00	
Q4. What is your average alcohol consumption?(1 drink = 5 oz wine, 1 beer, 1½ oz spirits; single response)			
(a) 1 per day	100	33.00	
(b) 2 per day	90	29.70	
(c) >2 per day	70	23.10	
(d) 4+ per day	43	14.20	
Q5. I take snuff instead of cigarettes.(frequency; single response)			
(a) Never	60	19.80	
(b) Occasionally	80	26.40	
(c) Frequently	100	33.00	
(d) Always	63	20.80	
Q6. I smoke more than 2 sticks per day.(frequency; single response)			
(a) Never	70	23.10	
(b) Occasionally	60	19.80	
(c) Frequently	100	33.00	

(d) Always	73	24.10	
Q7. Do you take alcoholic drinks?(frequency; single response)			
(a) Never	90	29.70	
(b) Occasionally	65	21.45	
(c) Frequently	100	33.00	
(d) Always	48	15.85	
Q8. I take more than two bottles of alcohol per day.(frequency; single response)			
(a) Never	80	26.40	
(b) Occasionally	60	19.80	
(c) Frequently	90	29.70	
(d) Always	73	24.10	
Q9. I forget to take my drugs.(frequency; single response)			
(a) Never	70	23.10	
(b) Occasionally	103	34.00	
(c) Frequently	80	26.40	
(d) Always	50	16.50	
Q10. The drugs I take must be causing some side effects.(frequency; single response)			
(a) Never	70	23.10	
(b) Occasionally	83	27.40	
(c) Frequently	80	26.40	
(d) Always	70	23.10	
Q11. I think I am taking too many drugs.(frequency; single response)			
(a) Never	80	26.40	
(b) Occasionally	110	36.30	
(c) Frequently	60	19.80	
(d) Always	53	17.50	
Q12. I skip my medications when I feel like it.(frequency; single response)			
(a) Never	70	23.10	
(b) Occasionally	90	29.70	
(c) Frequently	65	21.45	
(d) Always	78	25.75	

Table 6: Smoking/Alcohol/Medication section.

^a Percentages for Q2 are of the 200 respondents who reported smoking; respondents could choose more than one option.

Among the 303 respondents, two-thirds (66.0 %) smoke. Of these smokers, cigarettes remain the predominant choice (60.0 %), though 39.0 % report using cocaine and roughly a third use marijuana (35.0 %) or weed (32.5 %). Daily smoking intensity is moderate: 30.0 % smoke 1–2 sticks per day, but over a third (35.0 %) smoke 3–4 sticks, with smaller proportions consuming 5–6 sticks (20.0 %) or 7+ sticks (15.0 %). Alcohol use is also common: one-third consume one drink daily and 29.7 % have two drinks, while a quarter exceed two drinks per day (23.1 %) or more (14.2 %).

When it comes to snuff, one-third (33.0 %) use it frequently, and 20.8 % always substitute snuff for cigarettes. A similar pattern appears for heavy smoking: a third (33.0 %) frequently smoke more than two sticks daily, and 24.1 % do so always. Alcohol frequency shows that a combined 48.8 % drink frequently or always, while 29.7 % never drink. Heavy alcohol use (more than two bottles daily) is reported as frequently or always by 53.8 % of respondents.

Medication adherence is suboptimal: over half (59.4 %) forget their drugs occasionally or more often, and nearly half (50.4 %) believe their medications frequently or always cause side effects. A majority (56.1 %) feel they take too many drugs at least occasionally, and just under half (47.2 %) skip doses when they feel like it. These patterns underscore significant lifestyle and adherence challenges that could compromise hypertension control.

Discussion, Conclusion and Recommendations

Discussion

This study highlights persistent misconceptions and suboptimal self-care behaviors among hypertensive patients at OAUTH. Despite moderate awareness that elevated blood pressure indicates hypertension (40.60 %), nearly half of participants still favor unhealthy cooking methods (49.50 % "yes" to frying) and only one-third recognize boiling/grilling as ideal. Physical inactivity is widespread, with 65.97 % of patients reporting no regular exercise (Table 5). Tobacco use is highly prevalent (65.97 % smoke), and over half (53.80 %) consume more than two alcoholic drinks per day (Table 6). Medication non-adherence further compounds risk, as 42.90 % of respondents frequently or always forget doses.

Cardiovascular risk from smoking and heavy drinking

The observed smoking rate (65.97 %) elevates the risk of atherosclerosis, endothelial dysfunction, and uncontrolled hypertension. Similarly, chronic heavy alcohol consumption (>2 drinks/day in 53.8 % of patients) contributes to systolic blood pressure elevation and left ventricular hypertrophy. The 2021 WHO Hypertension Guidelines underscore tobacco and excessive alcohol as major modifiable risk factors for cardiovascular disease and advocate for integrated cessation strategies in hypertension care .

Clinical urgency for tailored behavior-change interventions

Given these risk behaviors, embedding brief motivational interviewing into routine consultations can significantly enhance patients' readiness to change. Randomized trials demonstrate that even a single 15-minute motivational session increases smoking-cessation rates by 10–25 % and reduces average alcohol intake by 20 % over six months . We recommend training clinic staff to deliver targeted counseling on smoking and alcohol reduction alongside dietary guidance, particularly emphasizing healthier cooking (boiling/grilling) and increased fruit/vegetable consumption.

Addressing medication non-adherence

Medication non-adherence remains a critical barrier: 42.90 % of patients report frequent or constant missed doses. Poor adherence predicts uncontrolled hypertension and increased hospitalization risk. A Cochrane review found that using pillboxes, SMS reminders, and pharmacy-driven refill calls can improve adherence by up to 30 % . We propose integrating simple electronic reminder systems and providing patients with standardized pill organizers at discharge, monitored during follow-up visits.

Integrating multidisciplinary support

Effective hypertension management demands a multidisciplinary team. Dietitians should provide culturally-adapted meal planning workshops, demonstrating low-salt recipes and hands-on grilling/boiling techniques. Physiotherapists can lead brief supervised exercise groups, targeting at least 150 minutes of moderate activity weekly. Pharmacists and nurses can reinforce medication counseling, side-effect management, and adherence aids.

Limitations and future directions

This single-center study may not generalize to all Nigerian hypertensive populations. The cross-sectional design precludes causal inference. Future research should evaluate the impact of the proposed interventions in a randomized, controlled framework, measuring blood pressure outcomes over 6–12 months.

Conclusion

This study reveals persistent knowledge gaps and risky behaviors among hypertensive patients at OAUTH: nearly half still believe frying is acceptable over boiling/grilling, two-thirds are inactive, two-thirds smoke, over half drink heavily, and 42.90 % frequently miss medications. These findings underscore the urgent need for targeted, evidence-based education and support. We recommend integrating brief motivational interviewing, culturally tailored nu-

trition workshops, supervised exercise groups, and adherence aids (pillboxes, SMS reminders) into routine care. By addressing misconceptions, promoting healthy cooking and activity, and reinforcing medication adherence through multidisciplinary collaboration, OAUTH can improve blood pressure control, reduce cardiovascular risk, and enhance patient outcomes.

Recommendations

Targeted education

Design concise, multi-modal education sessions (brochures, videos, workshops) to correct key misconceptions-especially about healthy cooking (promote boiling/grilling over frying), the role of lifestyle change, and the chronic nature of hypertension.

Personalized behavior-change counseling

Incorporate brief motivational interviewing into clinic visits. Offer one-on-one guidance on diet (low-salt meal planning), exercise (150 min/week goal), smoking cessation, and alcohol reduction, delivered by a team of dietitians, physiotherapists, and counselors.

Medication adherence support

Distribute standardized pillboxes and enroll patients in SMS-reminder programs. Monitor adherence at follow-up appointments, reinforcing strategies and troubleshooting barriers in real time.

Structured follow-up and digital monitoring

Schedule routine check-ins-via phone calls or telehealth-to reassess blood pressure, lifestyle practices, and knowledge. Utilize simple digital tools (apps or WhatsApp groups) for self-monitoring and peer encouragement.

Community engagement

Partner with local schools, churches, and NGOs to run periodic hypertension awareness events. Share practical cooking demonstrations and exercise mini-sessions to extend healthy practices beyond the hospital.

Provider training and collaboration

Implement regular in-service trainings on the latest WHO hypertension guidelines and brief-intervention techniques. Foster a multidisciplinary team approach to ensure consistent, evidence-based messaging.

By focusing on these targeted, evidence-based strategies, OAUTH can bridge knowledge gaps, foster sustainable lifestyle changes, and improve long-term blood pressure control.

By implementing these recommendations, OAUTH can significantly enhance the management of hypertension among its patients, leading to better health outcomes and improved quality of life. The hospital can serve as a model for other healthcare institutions in Nigeria and beyond, demonstrating the effectiveness of a comprehensive, patient-centered approach to chronic disease management.

Acknowledgements

The authors wish to express their sincere gratitude to the management and staff of Obafemi Awolowo University Teaching Hospital, Ile-Ife, for their cooperation and assistance in data collection.
We also thank our colleagues in the Department of Public Health at Abia State University and David Umahi Federal University of Health Sciences for their valuable insights during study design and analysis. Although this work did not receive any external funding, institutional support from our respective departments made this research possible.

Conflict of Interest

The authors declare that they have no financial or personal relationships that could inappropriately influence or bias the work presented in this manuscript. No conflicts of interest exist.

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