KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS PREVENTION OF HYPERTENSION AMONG STUDENTS OF THE UNIVERSITY OF BENIN: IMPLICATIONS FOR PUBLIC HEALTH EDUCATION

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A PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR BACHELOR OF MEDICINE, BACHELOR OF SURGERY DEGREE.

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SEPTEMBER, 2024.

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DECLARATION

We hereby declare that this project work titled "Knowledge, Attitude and Practice towards Prevention of Hypertension among Students of the University of Benin: Implications for Public Health Education" was carried out by us under the supervision of Dr. (Mrs) O.E Obarisiagbon and has not been submitted anywhere else for the award of a degree or certificate.

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CERTIFICATION

This is to certify that this research study titled "Knowledge, Attitude and Practice towards Prevention of Hypertension among Students of the University of Benin: Implications for Public Health Education" was carried out by **MADEZIA EMMANUEL IKEMEFUNA** with matriculation number **MED1606095** and **NNODUMENE SAMUEL EKELEDIRICHUKWU** with matriculation number **MED1606098** under my supervision in the Department of Public health and Community Medicine, School of Medicine, College of Medical Sciences, University of Benin, Benin City, Edo state, Nigeria as part of the requirements for the award of Bachelor of Medicine, Bachelor of Surgery (MB;BS).

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DEDICATION

This research project is dedicated to our loving parents Ogbueshi (Engr.) Ikem Emmanuel Madezia and Mrs. Mary Dumebi Madezia and wife Mrs. Deborah Chizobah Nnodumene.

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LIST OF ABBREVIATIONS

BP: Blood pressure

CNCD: Chronic non-communicable diseases

CVD: Cardiovascular disease

DBP: Diastolic pressure

KAP: Knowledge, attitude and practice

SBP: Systolic pressure

STEPS: Stepwise approach to surveillance

UBTH: University of Benin Teaching Hospital

UNIBEN: University of Benin

WHO: World Health Organization

DEFINITION OF TERMS

Attitude: a settled way of thinking or feeling about something.

Behavior: the way in which one acts or conducts oneself, especially towards others

Education: the process of receiving or giving systematic instruction, especially at a school or university.

Health: Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity

Hypertension: elevated BP, with a systolic pressure (SBP) between 120 and 129 mm Hg and diastolic pressure (DBP) less than 80 mm Hg

Knowledge: facts, information, and skills acquired through experience or education

Practice: the actual application or use of an idea, belief, or method, as opposed to theories relating to it

Prevention: the action of stopping something from happening or arising.

Student: a person who is studying at a university or other place of higher education

University: a high-level educational institution in which students study for degrees and academic research is done

ABSTRACT

INTRODUCTION

Hypertension, a major global health issue, affects a large portion of the adult population and is a key contributor to cardiovascular diseases. Although commonly associated with older adults, its prevalence is increasing among younger people, including university students. Modifiable risk factors like poor diet, insufficient physical activity, and stress significantly contribute to hypertension development. This study aimed to assess the knowledge, attitudes, and practices of University of Benin students regarding hypertension prevention.

METHODOLOGY

The study was conducted at the University of Benin, Nigeria, using a descriptive cross-sectional design with a sample of 424 undergraduate students. The study was conducted from July 2023 to September 2024. Participants were selected through stratified random sampling from various faculties. Data were collected via a pre-tested, adapted questionnaire distributed through Google Forms. The analysis was performed using IBM SPSS, incorporating both descriptive and inferential statistics with level of significance set at $p = < 0.05$. Ethical approval was obtained, and confidentiality was ensured by omitting personal identifiers.

RESULTS

The study found that nearly half of the participants (49.3%) were between 16 and 20 years old, with an average age of 21.42 years. Most participants (86.6%) demonstrated good knowledge of hypertension and its preventive strategies, with a significant correlation between knowledge and both their academic faculty and year of study. A strong positive attitude towards hypertension prevention was observed in 421 (99.3%) of respondents, and a significant link was found

between attitude and marital status (p = 0.029). Additionally, 409 (95.5%) of respondents practiced effective hypertension prevention, and all those with poor practices expressed willingness to change their behavior.

CONCLUSION

Most University of Benin students demonstrated good knowledge of hypertension and its prevention, correlated with their year of study and faculty. The majority had a positive attitude towards prevention, linked to marital status. Most practiced effective prevention strategies, and those with poor practices were eager to improve.

KEYWORDS

Hypertension, Knowledge, Attitude, Practice, Prevention, University Of Benin, Public Health Education, Students, Health Behavior, and Cardiovascular Health.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Hypertension is a global health burden and a leading cause of death and cardiovascular disease worldwide.[1] As per the World Health Organization (WHO) report 2008, hypertension affected 40% of the global adult population. Currently, an estimated 26% (972 million) of the world's population has hypertension. Additionally, it was forecasted that by 2025, the prevalence of hypertension would rise by 60%, reaching a total of 1.56 billion adults.[2] Although it is more common among older individuals, there is a growing occurrence of hypertension in the younger population.[3] If left untreated, this condition, can have serious implications. Those affected by high blood pressure are usually asymptomatic and undergoing a blood pressure check is one way to determine the presence of this disease.[4]

Numerous factors may contribute to the regulation of blood pressure and the development of hypertension. These factors include renal dysfunction, resistance in the blood vessels, abnormal vessel tone, dysfunction of the endothelium, imbalances in autonomic tone, insulin resistance, and various neuro-humoral factors. However, in approximately 95% of cases, there is no specific identifiable cause of hypertension.[5] Poorly controlled or undetected hypertension has been shown to lead to numerous health complications like Angina, Heart attack, atherosclerosis, cerebrovascular accident (also known as stroke), arrhythmias, and kidney damage.[4]

Evidence has shown that certain risk factors are associated with the development of hypertension. These risk factors can be classified into modifiable and non-modifiable. The modifiable risk factors include unhealthy diet intake that is high in saturated fat and low in vegetables and fruits, high salt intake, obesity, lack of exercise, excessive tobacco smoking and alcohol consumption,

physical inactivity, or a sedentary lifestyle. The non-modifiable risk factors include; disease conditions like diabetes, family history of hypertension, familial hypercholesterolemia, dyslipidemia, and chronic kidney disease.[6] Race and ethnic group (African Americans and Japanese), increasing age, genetic factors, impaired intrauterine growth, and low birth weight are also non-modifiable risk factors that have been identified with increased likelihood of onset of hypertension later in life.[5] Lifestyle modifications in diet, physical activity, alcohol, and tobacco smoking, stress management as well as obesity are risk factors that can be modified in the prevention and non-pharmacologic treatment of hypertension.[7] Early detection and prompt treatment of hypertension to prevent adverse clinical outcomes of the disease is as important as primarily preventing the occurrence of this disease through promoting public awareness of hypertension and its associated risk factors.[8]

Generally, health-promoting intervention through education is useful in modifying the risk factors of hypertension and in extension preventing the occurrence of this “silent killer” disease in the masses.[9] Efficient public health programs that pinpoint individuals at higher risk of hypertension, increase their knowledge about hypertension and cardiovascular disease, and offer risk management recommendations, significantly contribute to reducing the prevalence of hypertension.[10] A 3-year intervention program was implemented in a young adult population in Tunisia. The intervention was provided by physicians, paramedics, and nutritionists and the main intervention was streamlined to the promotion of health education on healthy living and lifestyle modifications, open sensitization, educational flyers, and mass media interventions. A remarkable decrease in the prevalence of hypertension was noted following this health education intervention.[11]

Acknowledging the significance of modifiable risk factors for hypertension and understanding the impact of lifestyle modification at a young age are both pivotal in decreasing the prevalence of hypertension and cardiovascular disease in this young age group.[10] The prevention and management of hypertension can be accomplished through the implementation of focused and/or population-centric strategies. The targeted approach, which is the traditional method in healthcare practice, plays a key role in this effort. It draws on the knowledge gained from public health initiatives focused on environmental control. Its goal is to implement a modest reduction in blood pressure across the entire population, leading to a subtle decrease in the overall distribution of blood pressure.[12]

The awareness of hypertension has increased worldwide over the last century. Numerous initiatives have been enacted to heighten awareness of hypertension, with a focus on populations exhibiting a high incidence of hypertension, notably among Black individuals and those with limited socioeconomic means. These endeavors seem to have succeeded in elevating awareness and promoting screening for hypertension. At present, there is a lack of discernible trends indicating disparities in hypertension awareness based on poverty level or educational background. This signifies a notable departure from the late 1980s and early 1990s when individuals with lower income and less education were less likely to be aware of hypertension.[12]

Interventions have been proven to be effective in preventing hypertension. These interventions can be community-based or institution-based. Community-based interventions include enhancing primary healthcare facilities, elevating the proficiency of family health professionals in remote regions, backing religious institutions and community organizations to implement widespread educational initiatives, and advancing infrastructure related to healthcare, sanitation, safety, leisure, and sports are key strategies. Also, increasing accessibility to parks, squares, swimming

pools, sports courts, football pitches, and outdoor aerobic equipment. Deploying mobile teams could prove beneficial in reaching rural or remote areas, as well as addressing specific socially vulnerable groups.[13] Institution-based interventions include health education of the populace in the particular institution to promote healthier lifestyle choices, providing access to nutritious food within the institution, encouraging physical activity, implementing institutional wellness programs, and offering regular health screenings including blood pressure checks.[13] A study was carried out by Relawati and Maulidawati in 2022 aimed to determine the health education effect regarding the risk factors of hypertension (stress and sodium diet) on the self-awareness of undergraduate students in Yogyakarta. Responses were obtained from the control group (no health education was given to them) and the intervention group before and after the intervention was administered to the respondents. The results of this study showed a significant difference between both groups and the study concluded that health education regarding risk factors for hypertension increased the awareness of undergraduate students.[14]

Universities have been intriguing focal points for implementing extensive intervention practices designed to manage diseases. Additionally, these institutions serve as hubs for intellectual and social development, acting as centers that amplify information and subsequently disseminate it to society.[13] A research study involving African-American girls utilized an intervention strategy that incorporated after-school dance classes and family education to diminish habits such as excessive television and video viewing, as well as activities associated with video games. The intervention also included the dissemination of informative newsletters and health education talks. The study participants exhibited a heightened inclination towards weight loss, reduced waist circumference, increased engagement in after-school physical activities, enhanced academic performance, and a significant decrease in sedentary behaviors like watching television

while maintaining a high-calorie diet.[15]The use of dramatization with playful health-related messages emerged as a promising and creative approach for collective learning, offering a blend of entertainment and education, fostering leadership opportunities, and encouraging group cooperation.[13]

1.2 STATEMENT OF THE PROBLEM

The World Health Organization estimates that about 1.28 billion adults have hypertension worldwide and two-thirds of this population are living in middle and low-income countries.[4] It is most prevalent in South and East Asia and Sub-Saharan Africa including countries like India, Japan, Nigeria, and South Africa.[16] The significant increase in the occurrence of hypertension in low and middle-income countries is majorly due to the increase in the risk factors for hypertension in this population.[4] In Africa, the estimated number of people living with hypertension has increased over the past years from 92.3 million people in 2000 to 130.2 million people living with hypertension in 2010. It is projected to increase to 216.8 million people by the year 2030.[17] In Nigeria, hypertension is commonly diagnosed as the most prevalent equivalent risk for cardiovascular diseases. Complications related to hypertension are responsible for approximately 25% of emergency hospital admissions in urban hospitals and a majority of hypertensive individuals in Nigeria do not receive adequate treatment or have suboptimal control of their blood pressure.[18]

Hypertension continues to be the leading factor contributing to a considerable financial burden, encompassing expenses associated with managing complications such as stroke, ischemic heart disease, and congestive heart failure. The economic strain manifests through direct healthcare expenditures linked to the treatment of cardiovascular disease and its risk factors.[19] These expenses are shouldered by individuals, governments, and the private sector. African countries at large including Nigeria also experience huge indirect financial losses due to the diminished productivity of individuals affected by stroke, heart failure, and ischemic heart disease, along with the forfeited savings and assets when families face overwhelming healthcare expenses, such

as those linked to post-stroke rehabilitation or dialysis for renal failure contribute to the economic impact. Additionally, there are substantial economic and social costs for families, especially in the absence of formal care systems, as they often need to provide intensive, long-term care for elderly relatives. Despite the current relatively low prevalence of hypertension in certain countries, the overall number of individuals with hypertension in low- and middle-income countries like Nigeria is substantial. A cost analysis of potential antihypertensive drug treatments revealed that low- and middle-income countries may not be able to afford the same level of treatment as high-income countries. This is due to limited resources in African countries, which must be allocated considering various competing health priorities. The average amount of healthcare expenditure as a percentage of gross domestic product for African countries is 6.3 percent unlike in more developed climes where expenditure and allocation to health care is higher.[20]

The average blood pressure among the Nigerian population is higher compared to populations in Europe and the United States. The burden of hypertension is increasing in Nigeria and lack of awareness about hypertension is a probable factor contributing to cardiovascular disease-related fatalities in the country. [18] The challenge of formulating a strategy to control hypertension is a common issue faced by many societies in Africa including Nigeria. While hypertension can be effectively treated, the challenging social and economic circumstances in numerous African nations including Nigeria complicate the execution of blood pressure control initiatives. The absence of a well-defined, evidence-based strategy has further hindered these efforts. Insufficient funds, lack of experience, and inadequate infrastructure continue to present significant obstacles to the detection and treatment of hypertension. Consequently, managing hypertension comprehensively is not only a therapeutic challenge but also a socioeconomic one. Ideally,

screening serves not only to identify hypertension but also as a foundation for educational and therapeutic interventions.[19]

Over the last two decades, young adults have experienced a notable rise in unhealthy risk factors such as obesity, inadequate dietary patterns, substance abuse, and reduced physical activity levels.[19] Unlike older adults, there is emerging evidence that young adults have experienced rising trends in incident cardiovascular disease during the past few decades. These current findings suggest the possibility of a forthcoming epidemic of cardiovascular disease among this younger population as they age.[21]

The transition into university education constitutes a major life shift that brings about adverse modifications in health-related behaviors. Due to the demanding nature of university education, the dietary pattern of students is altered. Aside from regular skipping of meals among university students, the majority of Nigerian university students consume carbonated drinks and snacks rich in trans-fat daily due to having little time to prepare meals and also consume insufficient amounts of fruits and vegetables because they are more expensive and not readily available on campuses because of their perishable nature.[22] University students live off their monthly pocket income and most students have no source of income aside from their parents. This factor contributes to the unhealthy consumption of meals high in saturated fats like vegetable oils that are cheap and readily available for their use. Alcohol consumption, another modifiable risk factor of hypertension is also common among Nigerian university students.[22] The prevalence of smoking among university students has also been on the rise thereby putting university students more at risk of developing non-communicable diseases including hypertension.[23]

There is a notable low level of knowledge regarding hypertension among university students which poses a significant concern. Insufficient awareness and understanding of hypertension in

this demographic leads to potential health risks impedes the adoption of preventive measures, hinders early detection, and also makes it impossible for them to teach the older population about this killer disease.[24] Nigerian young adults have a lower level of aerobic fitness profile than their counterparts in other developed countries, even though they maintain an optimal weight status. Similar to their peers in other developed and developing countries, they are also exposed to unhealthy lifestyles and health-related risks including poor eating habits which are further worsened by the widespread presence of fast food establishments, influence of social media, and sedentary behaviors. As a result of these lifestyle factors, they become more vulnerable to lower fitness levels and an increased likelihood of being overweight which are modifiable risk factors for hypertension.[25]

Stress, another modifiable risk factor for hypertension is an inevitable occurrence in the lives of Nigerian university students. In a university environment, stress can emerge from various sources, both academic and non-academic, encompassing socio-cultural and psychological factors. Potential stressors in the educational setting may involve challenges in adapting to a new environment, the nature and intensity of coursework, interactions with peers, parental and lecturers' expectations, as well as personal academic performance goals.[26] The available health promotion and preventive strategies in Nigerian universities are currently inadequate and need to be reinforced.[27] There is also an urgent necessity for enhanced and all-encompassing nationwide population-level preventive approaches to alleviate the impacts of hypertension in Nigeria.[18]

1.3 JUSTIFICATION OF THE STUDY

This study will provide data on the knowledge, attitudes, and practices of students of the University of Benin regarding hypertension prevention. It will identify areas of improvement and potential interventions to promote healthier lifestyle practices and reduce the risk of hypertension in this demographic and also tailor the interventions to their unique needs and challenges.

This study will also contribute data concerning preventing hypertension in the students of the University of Benin and the extent of available public health education in the university community. In addition, the result of this study will provide valuable insights for shaping policies concerning health promotion and prevention initiatives not only within university campuses but beyond.

Findings from this study will also guide the development of targeted public health education programs to improve hypertension awareness and prevention among students of the University of Benin. These programs can have a wider impact on the overall health of the student population and thereby extend to Nigerian society at large.

1.4 RESEARCH QUESTIONS

1. What is the level of knowledge of hypertension and its preventive strategies among the students of the University of Benin?
2. How do students perceive their susceptibility to hypertension, and what are their attitudes towards engaging in preventive behaviors?
3. To what extent do the students of the University of Benin engage in healthy lifestyle practices to prevent hypertension?
4. How willing are students at the University of Benin to commit to long-term behavior changes for the prevention of hypertension?

1.5 OBJECTIVES

1.5.1 GENERAL OBJECTIVE

To assess the knowledge, attitude, and practice towards hypertension prevention among students of the University of Benin to develop targeted interventions to promote effective hypertension prevention strategies among students.

1.5.2 SPECIFIC OBJECTIVES

1. To assess the level of knowledge among the University of Benin students regarding hypertension and its preventive strategies.
2. To evaluate the attitudes of students towards hypertension as a health concern
3. To investigate the health practices of the University of Benin students related to hypertension prevention
4. To assess the willingness of students to adopt preventive behaviors towards hypertension prevention

CHAPTER TWO

LITERATURE REVIEW

In recent years, hypertension has emerged as a critical public health concern globally, with its prevalence escalating across various demographic groups, including young adults. Amongst this demographic, university students represent a particularly significant cohort due to their transitional lifestyle and susceptibility to adopting unhealthy behaviors. The University of Benin, hosts a diverse student population, making it an ideal setting to explore the knowledge, attitudes, and practices (KAP) surrounding hypertension prevention within this demographic. By examining the factors influencing students' knowledge about hypertension, their attitudes towards preventive measures, and their actual practices in mitigating the risk factors, this literature review aims to shed light on the gaps and challenges in hypertension prevention education among this population.

This review synthesizes existing literature on KAP regarding hypertension prevention globally, focusing on studies conducted among university students to draw parallels and distinctions with the context of the University of Benin. By critically analyzing the available research, this review seeks to identify patterns, discrepancies, and potential areas for improvement in current public health education strategies aimed at hypertension prevention among university students.

Generally, blood pressure can be classified into;

1. Normal blood pressure: Normal blood pressure is less than 130/85mmHg

2. High Normal blood pressure: High normal blood pressure ranges between 130-139mmHg systolic and 85-89mmHg diastolic
3. Grade 1 hypertension which ranges between 140-159mmHg systolic blood pressure and 90-99mmHg diastolic blood pressure
4. Grade 2 hypertension sets in when the blood pressure exceeds 160/100mmHg.[28]

2.1 KNOWLEDGE OF HYPERTENSION AND ITS PREVENTIVE STRATEGIES

A cross-sectional study was carried out in 2020 among 605 students of universities in Riyadh City, Saudi Arabia to determine the level of knowledge of hypertension and its associated risk factors. A convenience sampling technique was used in this study and the findings revealed that 17 (15.6%) respondents from the humanitarian departments had good knowledge of hypertension while 92 (84.4%) had poor knowledge, 112 (43.9%) from the faculty of health had good knowledge while 143 (56.1%) had poor knowledge and 59 (24.5%) participants from the science track had good knowledge of hypertension while 182 (75.5%) had poor knowledge of hypertension. [29]

A descriptive cross-sectional study was carried out on the Pulchowk Campus, Lalitpur, Institute of Engineering, Tribhuvan University, Kirtipur, Nepal among 106 first-year bachelor-level students of Civil Engineering. The study was carried out in 2018 to ascertain the level of awareness among youths regarding the prevention of hypertension. The results showed that 54(50.9%) of participants had adequate awareness of hypertension prevention while 52 (49.1%) of participants had inadequate knowledge of hypertension prevention. It also revealed that the majority of the respondents were aware that diet, stress management, and exercise were strategies for preventing hypertension. [30]

A cross-sectional survey was carried out among 230 first-year students of the International University of Africa, Sudan in 2018 to assess the knowledge of risk factors of hypertension. The study showed that the overall good knowledge regarding hypertension among the participants was 67.39% with respondents from the faculty of nursing having the highest level of knowledge. Furthermore, 96 (41.73%) of respondents were aware that stress and obesity were modifiable risk factors of hypertension and 134 (51.73%) knew that age and family history were non-modifiable risk factors of hypertension.[31]

A cross-sectional study was carried out in India in 2018 among 454 undergraduate students to ascertain the knowledge regarding risk factors of hypertension. The participants in this study were selected at the convenience of the researchers and data collection was done via a self-administered questionnaire. The findings revealed that 335 (78.0%) of respondents knew what hypertension is, 68.3% and 62.6% of the respondents knew that unhealthy eating and obesity were risk factors for hypertension. Also, Heart attack emerged as the most known complication of hypertension among respondents (82.4%).[32]

A cross-sectional study was carried out in a dental hospital in southwest Nigeria among 88 final-year dental undergraduate students and dental nursing students in the dental center, University College Hospital, Ibadan, Nigeria in 2020 to assess the knowledge and practice of blood pressure. A convenience sampling technique was used to obtain the participants of this study and data was collected using a structured self-administered questionnaire. The findings of this study revealed that 64 (46.0%) of respondents had poor knowledge, 22(75.9%) dental students had good knowledge while the majority 42 (71.2%) of the dental nursing respondents had poor knowledge.[33]

A cross-sectional study was done among 1200 undergraduate students of the University of Ibadan and Lead City University, Ibadan, Nigeria in 2021 to assess the knowledge and prevalence of behavioral risk factors for non-communicable diseases. A systematic random sampling technique was utilized with the first stage being the selection of the faculties within the University categorized into science-related, Education, and Art-related, followed by the selection of the Departments by balloting and lastly, the selection of the respondents within each department. Conclusions drawn from this study revealed that respondents from the University of Ibadan 364 (60.7%) had good knowledge of risk factors or behaviors for non-communicable diseases while 257 (42.8%) of participants from lead city university had good knowledge.[34]

A cross-sectional study was carried out at the University of Lagos, Nigeria in 2018 among 422 final-year students selected through convenient stratification. Data was collected using Self-administered questionnaires and the research aimed to assess the knowledge of non-communicable diseases and risk factors among participants. The study revealed that 89.5% of respondents in the health-related discipline (college of medicine campus) had good knowledge of non-communicable cardiovascular diseases and their risk factors while 65% of respondents from other disciplines (Akoka campus) had good knowledge. 10.5% of participants from the health disciplines had poor knowledge while 35% of respondents from other disciplines had poor knowledge.[35]

A descriptive cross-sectional study was carried out at the University of Uyo in 2024 among 352 participants from the faculty of Education, the aim was to assess the knowledge and preventive strategies of hypertension among them. A simple sampling technique was utilized and data was collected using a researcher-made questionnaire. The mean analysis of participants' responses revealed a mean score of 2.50 indicating that respondents knew that genetic composition,

smoking, alcoholism, obesity, and high salt intake can cause hypertension. The level of knowledge of respondents on the causes of hypertension was high with a grand mean score of 2.72.[36]

2.2 ATTITUDE TOWARDS HYPERTENSION PREVENTION

A cross-sectional study was carried out at the University of Karbala, Iraq in 2018 among 400 students to determine their knowledge, attitude, and practice regarding hypertension. Data was collected using interviewer-administered questionnaires and the findings revealed that more than 60% of the respondents had a positive attitude towards hypertension prevention and 32% had a negative attitude towards hypertension. There was also a significant correlation between respondents' gender and their attitude towards hypertension.[37]

A cross-sectional study was carried out in 2020 among 340 students of the faculty of medicine and health sciences at, the University of Putra, Malaysia to ascertain the knowledge, attitude, practice, and awareness of hypertension. A stratified sampling technique was applied in this study and data collection was via questionnaires on Google Forms. Conclusions drawn from this

study revealed that 183 (53.8%) of the respondents had a positive attitude towards hypertension and 157 (46.2%) of the participants had a negative attitude.[38]

A descriptive cross-sectional study was carried out in 2016 among 163 students of the International Islamic University, Malaysia. The respondents were collected using a stratified random sampling technique and data was collected via self-administered questionnaires. The research study aimed to assess the knowledge, attitude, and practice of students on risk factors for cardiovascular diseases. The results showed that 139 (87.4%) strongly agreed that exercising is essential in maintaining a healthy lifestyle, 108 (67.9%) also strongly agreed that it is important to control their stress levels and 123 (77.4%) of the participants strongly agreed that is important to add vegetables to their diet to maintain their health.[39]

A cross-sectional study was conducted in the Female College of Medicine and Applied Medical Sciences, Northern Border University, Arar, Saudi Arabia among 150 students in 2018. The study was carried out to assess the knowledge, attitude, and practice of the respondents towards cardiovascular diseases as well as the prevalence of hypertension and obesity. The results revealed that 49.33% had a positive attitude towards regularly checking their blood pressure, 61.33% had a positive attitude towards being updated on their cholesterol levels, half of the respondents 50.00% also had a positive attitude towards maintaining a healthy body weight and 54.66% of the respondents had a positive attitude towards exercising regularly.[40]

A descriptive cross-sectional study was carried out among 409 students of the University of Ibadan, Oyo state, Nigeria in 2015 to ascertain the knowledge, attitude, and practice of physical exercises. A multi-stage sampling technique was utilized in this research with the first stage being selection the faculties, second stage being the selection of the departments, third stage was a proportionate selection of the total number of respondents and the fourth stage was the

selection of the respondent using simple random sampling. Data was collected using self-administered questionnaires and the study revealed that 390 (96.3%) agreed that individuals should be encouraged to engage in physical exercises and 10 (2.5%) disagreed. 380 (93.8%) agreed that taking part in regular physical exercises is a healthy habit that should be encouraged and 10 (2.5%) of the respondents disagreed. Overall, 97% of the total participants had a positive attitude towards physical exercises.[41]

A descriptive cross sectional study was conducted in 2014 among 318 students in the college of medicine, University of Lagos, Lagos, Nigeria. This study utilized a simple random technique by balloting and selected two levels in the college, 200 and 500 level among which the respondents were gotten from. The study aimed to ascertain the alcohol knowledge and consumption among the participants. Data was collected via pre tested self-administered questionnaires and the findings revealed that 97 (40.4%) of the participants agreed that alcohol consumption is dangerous to one's health and can lead to the onset of cardiovascular diseases 80 (33.3%) disagreed and 22 (9.2%) of the respondents strongly disagreed.[42]

A descriptive cross sectional study was conducted among 381 undergraduate students of Bayero University, Kano, Nigeria in 2021. This study utilized a two-staged sampling technique and data collection was done by an adapted semi-structured interviewer administered questionnaires. The objective of this study was to ascertain the knowledge, attitude and practices of Energy drinks consumption among the participants. The results revealed that 174 (45.7%) of the participants strongly agreed that it is good to consume excessive energy drinks despite adverse effect it might have on health.[43]

A descriptive cross sectional study was conducted among 40 undergraduate students of the University of Jos, Jos, Nigeria in 2022. Participants were selected using a purposive sampling

technique and a structured self-administered Google form questionnaire was used for data collection. This research study aimed to assess the knowledge, attitude, and perception of morning exercises among the respondents. Conclusions drawn from this study revealed that 22 (55.0%) of the participants strongly disagreed that morning exercises do little to improve the health and well-being of individuals, 6 (15.0%) strongly agreed and 3 (7.0%) agreed. Also, 11 (27.5%) of the respondents strongly agreed that morning exercises are important in having all-round good health and preventing cardiovascular diseases, and 2 (5.0%) of the respondents strongly disagreed.[44]

2.3 PRACTICES TOWARDS HYPERTENSION PREVENTION

A cross-sectional study was carried out in the Dar es Salaam University College of Education in Tanzania among 540 undergraduate students in 2022 to assess the knowledge, attitude, and practices on Non-communicable diseases. Data collection was done using structured questionnaires and the study revealed that only 9 (1.6%) of the respondents consumed tobacco and they consumed around 2 tobacco products each day. Almost all the respondents 99% reported that they took fruits and vegetables at least once per week. 473 (82.4%) reported that they added salt to their already cooked food, 75 (13.1%) consumed alcohol and 60.1% of the participants engaged in physical exercises.[45]

A cross-sectional study was conducted among 486 undergraduate students of the Global Institute of Public Health, Thiruvananthapuram, Kerala, India in 2019 to ascertain the knowledge and lifestyle practices associated with non-communicable disease risk factors. A stratified random sampling technique was applied in this study and data collection was done via self-administered questionnaires. Conclusions drawn from this research study revealed that 121 (25.0%) of the respondents had unhealthy dietary practices, 202 (42.0%) walked for at least 30 minutes daily, 153 (31.0%) were involved in relaxing leisure activities, the prevalence of alcohol and tobacco use among the respondents was very low.[46]

A cross-sectional study was conducted at Universiti Brunei Darussalam, Bandar Seri Begawan, Brunei, among 303 students in 2016 to assess the Dietary habits and lifestyle practices among the participants. Data was collected by self-administered questionnaire and the result of the study showed that 82.2% of the respondents ate junk food regularly, 60.7% consumed fried food, only 71 (23.4%) of the respondents consumed vegetables and 28 (9.2%) consumed fruits regularly.47

In 2018, a cross-sectional study was carried out at the Female College of Medicine and Applied Medical Sciences, Northern Border University in Arar, Saudi Arabia, involving 150 students. The study aimed to evaluate the respondents' knowledge, attitudes, and practices regarding cardiovascular diseases, as well as to determine the prevalence of hypertension and obesity. The findings showed that 20.0% of the respondents engaged in physical exercises for 20 minutes, 3 days a week, 33.3% of the respondents avoided fatty foods, 40.0% took measures to reduce their stress levels, 73.3% avoided smoking and 26.7% of the participants made efforts to maintain normal body weight.[40]

In 2014, a descriptive cross-sectional study was conducted at Najran University, Saudi Arabia, involving 433 students to evaluate the prevalence of tobacco use and examine their attitudes,

practices, and knowledge regarding smoking and its associated risks. The study found that 30.6% of the respondents smoked cigarettes, 28.3% used shisha, and 16.8% consumed snuff.[48]

A descriptive cross-sectional study involving 409 students from the University of Ibadan, Oyo State, Nigeria, was conducted in 2015 to evaluate their knowledge, attitude, and practice regarding physical exercises. The research employed a multi-stage sampling technique. In the first stage, faculties were selected, followed by departments in the second stage. The third stage involved proportionate sampling of the total number of respondents, and the final stage used simple random sampling to choose the participants. Data collection was done through self-administered questionnaires, and the findings indicated that 162 (40.2%) of the participants engaged in regular physical exercises, 89 respondents (22%) reported that they had been participating in physical exercise for weeks, followed by 70 respondents (17.3%) who stated they had been exercising for months. Meanwhile, 10 respondents (2.5%) and 48 respondents (11.9%) indicated that they had been involved in physical exercise for days and years, respectively.[41]

A descriptive cross-sectional study was conducted in 2014 involving 318 students from the University of Lagos, Nigeria. The study employed a simple random sampling method, using balloting to select students from the 200 and 500 levels. Its objective was to evaluate the participants' knowledge of alcohol and their consumption habits. Data were gathered through pre-tested self-administered questionnaires, and the study findings indicated that 80 (33.3%) of participants consumed alcohol while 160 (66.7%) did not consume alcohol.[42]

In 2022, a descriptive cross-sectional study was conducted at Lead City University, Ibadan among 316 students to ascertain the knowledge and perception of Alcohol abuse as a risk factor for non-communicable diseases among the participants. The study showed that 33 (15.3%) of the respondents did not consume alcohol, 31 (14.4%) consumed alcohol 2 – 4 times a month, 151

(69.9%) 2 – 3 times a week and only 1 (0.5%) of the participants consumed alcohol 4 or more times a week. 191 (88.4%) consumed 1 – 2 alcoholic drinks on a typical day while 25 (11.6%) consumed 3 – 4 alcoholic drinks on an average day.[49]

In 2022, a descriptive cross-sectional study was carried out among 40 undergraduate students at the University of Jos, Jos, Nigeria. Participants were chosen through purposive sampling, and data collection was conducted using a structured, self-administered Google Form questionnaire. The study aimed to evaluate the respondents' knowledge, attitudes, and perceptions regarding morning exercises. The conclusions from this research indicated that 28 (70.0%) of the participants engaged in morning exercises every day, and 12 (30.0%) sometimes engaged in physical exercises.[44]

2.4 WILLINGNESS TO CHANGE BEHAVIOUR

An observational cross-sectional study was conducted in 2016 among 257 students at the University of Amsterdam, Netherlands to ascertain their physical activity, willingness to be more active, perceived barriers, and their stimulant. Data collection was done via online questionnaires and findings showed that 51.0% of the respondents were not willing to engage in physical exercises and 49.0% were willing to engage in more physical exercises.[50]

In 2022, a cross-sectional study was carried out among 16 second-year undergraduate students of a public Malaysian university in Malaysia to determine if the participants would be willing to adopt a healthier lifestyle and the reasons behind their willingness to do so. Data was collected

via focused group discussions with the participants. All the participants in the research study commonly agreed that maintaining a healthy lifestyle is important. They expressed an eagerness to change their lifestyles, especially those who recognized how unearthly eating habits and sedentariness could lead to poor health.[51]

A cross-sectional study was conducted in 2022 among 266 students of medical universities in Karachi, Pakistan to ascertain the willingness to smoking cessation and its associated factors. A purposive sampling technique was employed to select the respondents and self-administered questionnaires were used to collect data. The findings revealed that 37 (65.5%) of participants in their first year of study were willing to stop smoking and 21 (34.5%) of participants from the same group were recalcitrant to adopting a healthier lifestyle. 48 (64.8%), 32 (61.5%), 28 (68.3%), and 25 (60.9%) in their second, third, fourth, and fifth year of study were all willing to cease tobacco consumption.[52]

In 2016, a cross-sectional study was performed among 316 students in a public university in Malaysia to ascertain their socio-demographic characteristics and willingness to quit smoking. A cluster sampling technique was used in this study between two faculties that were selected randomly from a list of sixteen faculties. Data was collected using pretested structured self-administered questionnaires. The results of the research revealed that 134 (42.4%) of the respondents were willing to change their behavior and 182 (57.6%) were not willing to change their behavior.[53]

In 2017, a cross-sectional study was carried out among 316 students at the University of Putra, Malaysia to assess the willingness to quit smoking and its associated factors. The study employed a cluster sampling technique and data collection was done using self-administered questionnaires. The study revealed that 42.4% of the participants were willing to quit smoking. [54]

A cross-sectional study was conducted among 280 students of the University of Ado-Ekiti, Ekiti state, Nigeria. Data was collected using pre-tested self-administered questionnaires and the participants were selected using multi-stage sampling. The study aimed to evaluate the smoking patterns and willingness to change among the respondents and was carried out in 2015. The results showed that 29.0% of the respondents were willing to adopt healthier lifestyle practices and quit smoking, all the participants who had received lectures on smoking were significantly willing to cease smoking. This finding underscores the implication of health education on lifestyle choices of individuals. The research also showed 40.0% of the respondents who smoked for relaxation were willing to quit and adopt healthier lifestyle practices.[55]

A descriptive cross-sectional study was conducted among 450 undergraduate students in tertiary institutions in Kaduna state, Nigeria in 2023 to investigate the health-seeking behavior among the participants. Stratified and purposive sampling techniques were employed in this study and data collection was via questionnaires and in-depth interviews. The results showed that 344 (76.0%) were willing to incorporate lots of fruits and vegetables into their diet, 372 (90.1%) were willing to improve on their proper self-care and personal hygiene, 311 (75.0%) were willing to engage in physical activities.[56]

In 2021, a descriptive cross-sectional study was carried out among 500 students of Alex Ekwueme Federal University, Ndufu-Alike, Ebonyi state, Nigeria to ascertain the prevalence, knowledge of health effects, and attitude towards smoking. Data collection was done through self-designed questionnaires. The results revealed that 61 (15.25%) of the respondents were willing to stop smoking, 78 (19.5%) were not willing to stop smoking and adopt healthier lifestyle practices.[57]

CHAPTER THREE

MATERIALS AND METHODS

3.1 STUDY AREA

The study was conducted at the University of Benin, located in Ovia North-East Local Government Area, Ugbowo, Benin City, Edo State, Nigeria. Edo State is bounded in the north by Kogi State, in the northeast by the River Niger, to the east by Anambra State, to the south by Delta State, and the north by Ondo State.[58] Benin City is the capital and largest city of Edo State.

It is bounded in the north by the Benin River and to the east by Lagos.[59] Ovia North-East Local Government Area is one of the 18 local government areas in Edo State, with its headquarters in Okada, and it shares a boundary with the University of Benin Teaching Hospital (UBTH).[58]

The University of Benin is located at Latitude: 6° 20' 1.32" N and Longitude 5° 36' 0.53" E.[60] It is bounded to the west by Ekosodin community, bounded to the East by UBTH, bounded to the south by Bendel development and property authority area (BDPA).[61] The University of Benin was founded on the 23rd of November, 1970, and has been renowned for its academic excellence and diverse student population. The institution achieved full university status in July 1971 and was taken over by the federal government in August, 1975.[62] The total student enrolment currently stands at more than eighty thousand, made up of both full- and part-time students shared among the various faculties.[63] The student body is the primary focus of this study, the student population at the university is characterized by its diversity in terms of age, background, race, ethnic group, religion, and academic disciplines. The inclusion of students from various departments and levels will provide a holistic perspective on the knowledge, attitude, and practices related to the prevention of hypertension.

Benin City, where the University of Benin is located has a tropical climate with distinct wet and dry seasons. The wet season, from April to October, brings heavy rainfall and high humidity. The dry season, from November to March, features lower humidity and warmer temperatures. Average temperatures range from 22°C to 33°C.[64] Benin City is the capital of Edo state and is known for their rich cultural heritage, hold deep-rooted beliefs and traditions. The monarchy plays a central role and the Oba serves as both a political and spiritual leader. Traditional religious practices, centered on deities like Olokun and Ogun, co-exist with Christianity and Islamic practices in the city. The Benin are renowned for their artistic prowess, seen in intricate

bronze sculptures. Festivals, ancestral veneration, coral bead-making, and oral traditions contribute to their cultural identity.[65]

3.2 STUDY DESIGN

A descriptive cross-sectional study design was employed.

3.3 STUDY POPULATION

The focus of this study was on students pursuing different undergraduate degree programs at the University of Benin.

3.4 SELECTION CRITERIA

3.4.1 INCLUSION CRITERIA

The inclusion criteria for this study required participants to be University of Benin students, aged 18 to 35, to ensure relevance to the university population. Participants were also expected to give informed consent for their involvement. The study included students from different academic levels and disciplines.

3.4.2 EXCLUSION CRITERIA

Students who were ill were excluded from the study, as were those with scheduled tests or examinations. Individuals outside the specified age range, those who did not provide informed consent were also not included in the study.

3.5 STUDY DURATION

This study was carried out from July 2023 to September 2024.

3.6 SAMPLE SIZE DETERMINATION

The sample size for this study was 424 respondents.

The number of respondents was determined using the Cochran's formula

$$n = \frac{z^2 X\ p\ X\ q}{d^2}$$

Where n= sample size

z= 95% confidence level

p= estimated proportion of the population with the attribute of interest

q= 1-p

d=margin of error.

Where z= 1.96

p= 50.9%=0.509

p value was obtained from a study by Dangol and Baral on awareness regarding prevention of hypertension among youths in a selected Campus.[53]

q=1−p (1-0.509) =0.491

d=0.05

$$\text{Sample size} = \frac{1.96^2 x 0.509 x 0.491 =}{(0.05)^2}$$

$$= \frac{3.8416 x 0.509 x 0.491}{0.0025}$$

$$= \frac{0.9600888304}{0.0025}$$

$$= 384.04 = 385$$

Taking into account 10% non-response

10% of 385=38.5

38.5+385=423.5=424

The final minimum sample size for the study was **424**

3.8 SAMPLING TECHNIQUE

A stratified random sampling technique was used. There were eight strata, representing students from the faculty of Arts, Basic medical sciences, Engineering, Medicine, Management sciences, Life Sciences, Agriculture, and Social Sciences. Each stratum had an equal representation of the total sample size, with 53 participants from each faculty, and participants from each stratum were randomly selected from the total population of that stratum.

3.9 DATA MANAGEMENT

3.9.1 TOOLS FOR DATA COLLECTION

The quantitative tool used in this research study was questionnaires. It was standardized and structured to comprise of questions and divided into the following sections:

SECTION A: Sociodemographic characteristics

This section consisted of nine questions concerning the respondents' age, sex, marital status, faculty, year of study, religion, monthly allowance/income, and tribe.

SECTION B: Assessment of the Knowledge of hypertension and its preventive strategies

This section provided responses regarding the knowledge of hypertension and its preventive measures. The assessment was conducted through twelve questions.

SECTION C: Assessment of the Attitude towards Hypertension Prevention

This section comprised nine Likert scale questions designed to evaluate the respondents' attitudes towards hypertension prevention.

SECTION D: Assessment of Respondents' Lifestyle Practices towards Hypertension Prevention

This section of the questionnaire gave responses concerning the lifestyle practices of the respondents concerning hypertension prevention. It consisted of thirteen close ended questions.

SECTION E: Assessment of Willingness of respondents to change behavior

This section provided responses to questions related to the respondents' willingness to modify their behavior. It included six closed-ended questions.

3.9.2 METHOD OF DATA COLLECTION

Data collection for this research study was done using a self-administered questionnaire using Google forms. The questionnaire was adapted from previously validated instruments from previous research done on hypertension prevention.[66, 67, 68] The adapted version maintained the core sections and structure of the original tool but was modified to fit the specific context of this study and the population of interest.

3.9.3 PRE-TESTING

The questionnaire was pre-tested with students at the Delta State University, Abraka, Delta State. Ten percent of the total sample size (42 questionnaires) was used for the pre-test. The purpose of this pre-test was to assess the clarity and comprehension of the questionnaire by the students. Necessary revisions were made as needed before starting the main survey.

3.9.4 DATA ANALYSIS

Data from the Google Form responses were transferred into IBM Statistical Package for Social Sciences (SPSS for) Windows, Version 25.0, for analysis. The initial analysis included generating frequency tables for the variables, followed by cross-tabulations to explore relationships between respondents' knowledge, attitudes, and practices regarding hypertension, as well as their willingness to change behavior and socio-demographic factors including age, sex, religion, faculty, marital status, year of study, monthly allowance/income, and primary caregiver. Descriptive statistics (mean and standard deviation) and inferential statistics (Chi-square test, Fisher's Exact test, and logistic regression) were used to assess statistical relationships between the variables, with significance set at $p < 0.05$.

3.9.5 SCORING

KNOWLEDGE OF HYPERTENSION AND ITS PREVENTIVE STRATEGIES

Knowledge of hypertension and its preventive strategies was evaluated using a total of twelve questions including awareness of hypertension and source of information on hypertension, definition of hypertension, causes, risk factors, diagnosis, effects, treatment and preventive strategies for hypertension. Each correct answer concerning the definition, diagnosis, treatment and preventive strategies for hypertension were awarded a score of one and each incorrect answers were given a score of zero. The total maximum score gotten was four while the minimum score was zero. Scores were converted to percentages and categorized as follow; 0% – 49.9% indicated Poor Knowledge while 50.0% – 100% indicated Good Knowledge.

ATTITUDE TOWARDS HYPERTENSION PREVENTION

The respondents' attitudes towards hypertension prevention were evaluated through nine questions, each measured using a 5-point Likert scale graded as follows; Strongly disagree = 1, Disagree = 2, Uncertain = 3, Agree = 4, and Strongly agree = 5. The scores were added together to give a total maximum score of 45. Scores were converted to percentages and graded as follows; 0% – 49.9% indicated Negative attitude while 50.0% – 100% indicated Positive attitude.

PRACTICE TOWARDS HYPERTENSION PREVENTION

The practices of the respondents was evaluated using a total of thirteen questions including blood pressure measurement, dietary habits, junk food consumption, physical exercises, smoking and alcohol consumption. Respondents who have previously measured their blood pressure, didn’t smoke or consume alcohol and engaged in regular physical exercises were given a score of one and respondents who didn’t were given a score of zero. A maximum score of four and a minimum score of zero were obtained and converted into percentages. Respondents with scores

between 0% and 49.9% were classified as having poor practice, while those with scores between 50.0% and 100.0% were considered to have good practice.

WILLINGNESS TO CHANGE BEHAVIOR

The respondents' willingness to adopt healthier lifestyle practices were assessed using six questions which included openness to reducing daily dietary salt intake, incorporating more fruits and vegetables into their dietary patterns, engaging in regular physical activity, reducing alcohol consumption to the barest minimum, monitoring blood pressure more frequently and seeking advice from qualified health care professionals regarding hypertension. Each "yes" response was assigned a score of one, while each "no" response received a score of zero. The highest possible score was six, which was then converted into percentages. Respondents with scores ranging from 0% to 49.9% were classified as not willing to change their behavior, whereas those scoring between 50.0% and 100% were considered willing to change their behavior.

3.9.6 DATA PRESENTATION

Data were presented using prose, frequency tables, and graphical charts.

3.10 ETHICAL CONSIDERATION

Ethical approval was secured from the Ethical Committee of the University of Benin Teaching Hospital (**ADM/E 22/A/VOL. VII/148654821)**. The respondents were informed that participation in the study was voluntary and Confidentiality was ensured by not recording

respondents' emails or collecting their names along with their responses. Written consent was also obtained before the respondents participated in the study.

3.11 LIMITATIONS OF THE STUDY

This study was limited by the unwillingness of some students to respond to the questionnaires. This was overcame by detailed explanation for the purpose of the research and assurance of confidentiality by not recording their emails with their responses as well as their names.

CHAPTER 4

4.0 RESULTS

A total of 424 respondents participated in this study, resulting in a response rate of 100%. The findings are presented in the following sections according to the specific objectives.

SECTION A: Socio demographic characteristics of respondents

SECTION B: Knowledge of hypertension and its preventive strategies among respondents

SECTION C: Attitude of respondents towards hypertension prevention

SECTION D: Practices of respondents towards hypertension prevention

SECTION E: Willingness of respondents to change behavior

4.1 SECTION A: SOCIODEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Table 1A: SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

VARIABLE	FREQUENCY (n=424)	PERCENT (%)
Age(years)		
16-20	209	49.3
21-25	169	39.9
26-30	41	9.7
31-35	5	1.2
	Mean ± S.D = 21.42 ± 3.09	
Sex		
Male	244	57.5
Female	180	42.5

Faculty		
Agriculture	53	12.5
Arts	53	12.5
Basic Medical Sciences	53	12.5
Engineering	53	12.5
Life Sciences	53	12.5
Management Sciences	53	12.5
Medicine	53	12.5
Social Sciences	53	12.5
Year of Study		
100	71	16.7
200	72	17.0
300	134	31.6
400	81	19.1
500	17	4.0
600	49	11.6
Marital Status		
Single	412	97.2
Married	8	1.9
Divorced	2	0.5
Cohabiting	2	0.5
Religion		
Christianity	385	90.8
Islam	34	8.0
African Traditional Religion	2	0.5
Atheism	2	0.5
None	1	0.2

Table 1A shows the sociodemographic characteristics of the respondents. The respondents had a mean age of 21.42 ± 3.085 years with the majority 209 (49.3%) being between 16 and 20 years of age. 169 (39.9%) were between the ages 21-25 while 41 (9.7%) and 5 (2.1%) were aged between 26-30 and 31-35 respectively. More than half of the respondents 244 (57.7%) were males while 180 (42.5%) were females. 53 (12.5%) of the respondents were students of the Faculty of Arts, Agriculture, Basic Medical Sciences, Engineering, Medicine, Management Sciences, Life Sciences, and Social Sciences respectively. The majority of the respondents 134

(31.6%) were in their third year of study, 81 (19.1%) were in their fourth year of study, 17 (4.1%)

VARIABLE	FREQUENCY (n=424)	PERCENT (%)
Primary Caregiver		
Both Parent	311	73.3
Father only	18	4.2
Mother only	53	12.5
Family/Friends	1	0.2
Guardian/Relatives	19	4.5
Self-supporting	21	5.0
Husband	1	0.2

were in their fifth year of study, 49 (11.6%) were in their sixth year of study while 72 (17.0%) and 16 (16.7%) of the respondents were in their first and second year of study respectively.

Most of the respondents 412 (97.2%) were single, 8 (1.9%) of the respondents were married while 2 (0.5%) of the respondents were Divorced and Cohabiting. In terms of religion, the majority of the respondents 385 (90.8%) practiced Christianity, 34 (8.0%) of the respondents practiced Islamic religion, 2 (0.5%) of the respondents practiced African Traditional Religion and Atheism respectively while 1 (0.2%) respondents did not practice any type of religion

Table 1B: SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Monthly allowance/Income		
Below 20,000	135	31.8
21,000-40,000	120	28.3
41,000-60,000	85	20.0
61,000-80,000	34	8.0
81,000-100,000	12	2.8
Above 100,000	38	9.0
Ethnicity		
Igbo	110	25.9
Benin	71	16.7
Yoruba	58	13.7
Esan	46	10.8
Others**	26	6.1
Etsako	23	5.4
Urhobo	21	5.0
Edo	18	4.2
Hausa	12	2.8
Isoko	7	1.7
Ijaw	5	1.2
Ika	5	1.2
Delta	5	1.2
Nupe	4	0.9
Tiv	3	0.7
Ukwuani	3	0.7
Akoko-Edo	3	0.7

** Others include Adara, Agbor, Annang, Atte, Atyap, Berom, Ebira, Emar, Ibibio, Idoma, Igala, Itsekiri, Jukum, Kwale, Ogume, Okpameri, Okrika, Uneme

Table 1B shows the sociodemographic characteristics of the respondents. Both parents were the primary giver for the majority of 311 (73.3%) of the respondents, 53 (12.5%) of the respondents

had the mothers only as their primary caregivers, 18 (4.2%) had their fathers only, 19 (4.5%) had Guardians and Relatives, 1 (0.2%) of the respondents had their Friends and Husband as their primary caregivers respectively while 21 (5.0%) of them were self-supporting. Additionally, 135 (31.8%) of the respondents had a monthly allowance below 20,000 naira, 120 (28.3%) of them had a monthly allowance ranging from 21,000 to 40,000 naira, 85 (20.0%) had a monthly allowance ranging between 41,000 to 60,000 naira while 38 (9.0%) of the respondents had a monthly allowance greater than 100,000 naira. In terms of ethnicity, the largest proportion of respondents identified as Igbo, accounting for 110 (25.9%) of the sample. The Benin ethnic group followed with 71 (16.7%), while 58 (13.7%) identified as Yoruba. Respondents from the Esan ethnic group made up 46 (10.8%), and those categorized under 'Others' constituted 26 (6.1%). Additionally, 23 (5.4%) of the respondents were Etsako, 21 (5.0%) were Urhobo, and 18 (4.2%) were Edo. Other ethnic groups such as Hausa 12 (2.8%), Isoko 7 (1.7%), Ijaw 5 (1.2%), Ika 5 (1.2%), Delta 5 (1.2%), Nupe 4 (0.9%), Tiv 3 (0.7%), Ukwuani 3 (0.7%), and Akoko-Edo 3 (0.7%) were present in smaller proportions.

4.2 SECTION B KNOWLEDGE OF HYPERTENSION AND ITS PREVENTIVE STRATEGIES

TABLE 2: AWARENESS OF HYPERTENSION AMONG RESPONDENTS

VARIABLE	FREQUENCY (n=424)	PERCENT (%)
Awareness of Hypertension		
Yes	401	94.6
No	23	5.4
Source of Information (n=1006)*		
Internet/Social Media	212	50.0
Health care professionals	204	48.1
Family/Friends	196	46.2
Television/Radio	171	40.3
University/School	151	35.6
Newspaper/Magazine	67	15.8
Others**	5	1.2

***Multiple Responses** ****others include seminars and movies**

Table 2 shows the awareness of hypertension among the respondents. Majority of the respondents 401 (94.6%) were aware of hypertension while only 23 (5.4%) of them were unaware of hypertension. The most common source of information on hypertension was from the internet and social media 212 (50.0%) which was closely followed by healthcare professionals 204 (48.1%). 196 (46.2%) of the respondents got information about hypertension from their family members and friends, 171 (40.3%) of the respondents got their awareness on hypertension from the Television and Radio, 151 (35.6%) of them got their information on hypertension from their schools while 67 (15.8%) of them became aware of hypertension by reading print media. The least common source of information on hypertension 5 (1.2%) was from seminars and movies.

TABLE 3A: KNOWLEDGE OF HYPERTENSION AND ITS PREVENTIVE STRATEGIES AMONG RESPONDENTS

VARIABLE	FREQUENCY	PERCENT (%)
Do you know what hypertension is (n=424)		
Yes	337	79.5
No	87	20.5
Definition of hypertension (n=337)		
When an Individual's blood pressure is higher than 140/90mmHg	214	50.5
When an Individual's blood pressure is higher than 120/80mmHg	111	26.2
When an Individual's blood pressure is higher than 90/50mmHg	11	2.6
When an Individual's blood pressure is extremely low	1	0.2
Causes of hypertension* (n=996)		
High levels of stress	267	63.0
Consumption of food high in fat and cholesterol	179	42.2
Genetics	141	33.3
High salt diet	121	28.5
Old age	106	25.0
Obesity	95	22.4
Smoking	69	16.3
I don't know	18	4.3
Diagnosis of hypertension (n=337)		
Blood pressure measurement	261	61.6
I don't know	26	6.1
Chest X-ray	25	5.9
Blood test	23	5.4
Urine test	2	0.5
Effects of hypertension * (n=755)		
Heart attack	285	67.2
Stroke	211	49.8
Kidney failure	115	27.1
Diabetes	50	11.8
Memory problems	41	9.7
Psychosis	20	4.7
Hair loss	16	3.8
I don't know	16	3.8
Treatment of hypertension (n=337)		
Lifelong treatment		
Yes	216	50.9
No	97	22.9
I don't know	24	5.7

***Multiple responses**

Table 3A shows the knowledge of hypertension and its preventive strategies among respondents. Majority of the respondents 337 (79.5%) asserted that they knew what hypertension entails but only 214 (50.5%) of them correctly noted that hypertension means an elevated blood pressure above 140/90mmHg. 111 of the respondents constituting 26.2% of them wrongly agreed with the statement that hypertension involves elevated blood pressure greater than 120/80mmHg. 11 (2.6%) of them noted that hypertension is blood pressure higher than 90/50mmHg. Only 1 (0.2%) of the respondents incorrectly stated that hypertension means extremely low blood pressure. Furthermore, two-thirds of the respondents 267 (63.0%) agreed that high levels of stress are a cause of elevated blood pressure. 179 (42.2%), 141 (33.3%), 121 (28.5%), and 106 (25.0%) of the respondents also noted that consumption of food that is high in fat and cholesterol, genetics, high salt diet, and old age are contributors to elevated blood pressure respectively. 95 (22.4%) and 69 (16.3%) of the respondents noted that obesity and smoking are also causes of hypertension. 18 of the respondents representing 4.3% of them had no idea what the causes of hypertension were. Respondents were asked how hypertension is diagnosed and 261 of them constituting 61.6% correctly noted that blood pressure measurement is the tool used to assess elevated blood pressure levels. 26 (6.1%) of the respondents had no idea how hypertension is diagnosed, 25 (5.9%) and 23 (5.4%) of them incorrectly agreed that chest X-ray and blood tests are the methods used to detect hypertension respectively while 2 (0.5%) of the respondents indicated that urine test is used to diagnose hypertension.

About two-thirds of the respondents 285 (67.2%) recognized that sustained elevated blood pressure can result in a heart attack. 211 (49.8%) and 115 (27.1%) of the respondents correctly highlighted kidney failure and stroke as outcomes of hypertension. 50 (11.8%), 41 (9.7%) and 20

(4.7%) recognized diabetes, memory problems, and psychosis as effects of hypertension correspondingly. Sixteen of the respondents constituting about 3.8% of the respondents affirmed that hair loss is caused by hypertension similarly 16 (3.8%) had no knowledge of the effects of hypertension. 216 (50.9%) of the respondents indicated that hypertensive patients require lifelong treatment, 97 (22.9%) disagreed with this while 24 (5.7%) of the respondents had no idea on the duration of treatment for hypertensive patients.

TABLE 3B: KNOWLEDGE OF HYPERTENSION AND ITS PREVENTIVE STRATEGIES AMONG RESPONDENTS

VARIABLE	FREQUENCY	PERCENT (%)
Preventive strategies for hypertension		
Is hypertension preventable (n=337)		
Yes	297	70.0
No	11	2.6
I don't know	29	6.8
Can lifestyle changes help prevent hypertension (n=337)		
Yes	306	72.2
No	11	2.6
I don't know	20	4.7
Diet recommended to help prevent hypertension (n=337)		
DASH (Dietary approach to stop hypertension) diet	249	58.7
Low protein diet	35	8.3
High fat diet	27	6.4
High sugar diet	4	0.9
Lifestyle changes that can help prevent hypertension* (n=877)		
Managing stress	242	57.1
Regular physical activity	229	54.0
Maintaining a healthy weight	216	50.9
Smoking cessation	118	27.8
Increasing salt intake	32	7.5
High alcohol consumption	14	3.3
Restraining from physical exercises	13	3.1
I don't know	13	3.1

***Multiple responses**

Table 3B shows the knowledge of hypertension and its preventive strategies among respondents. The participant's knowledge of preventive measures for hypertension was assessed and a majority of them 297 (70%) had the conviction that hypertension is a preventable disease while 11 (2.6%) disagreed with the preventability of hypertension. 29 (6.8%) of the respondents had no idea if hypertension is preventable. Moreover, 306 respondents making up about 72.2% of them were certain that lifestyle changes can help in the prevention of hypertension while 11 (2.6%) of them disagreed with this. 20 (4.7%) of the respondents were unaware of the benefits of lifestyle changes towards hypertension prevention.

DASH diet was highlighted by 249 (58.7%) of the respondents to be the recommended diet to prevent hypertension. A low protein diet was noted by 35 (8.3%) of the respondents, 27 (6.4%) indicated a high-fat diet and 4 (0.9%) of the respondents expressed a high sugar diet to be a preventive diet in that order. More than half of the respondents 242 (57.1%) acknowledged managing stress properly contributes to preventing elevated blood pressure, this was closely followed by regular physical activity which 229 (54.0%) of the respondents noted to be a preventive measure. 216 (50.9%) of the respondents recognized that maintaining a healthy weight is a strategy to prevent hypertension while 118 (27.8%) noted that stopping smoking is one of the lifestyle changes that can help prevent hypertension. 32 (7.5%), 14 (3.3%), and 3 (3.1%) of the respondents indicated that increasing salt intake, high alcohol consumption, and restraining from physical exercises are preventive strategies for hypertension in that order. 13 (3.1%) of the respondents did not know preventive strategies of hypertension.

FIGURE 1: OVERALL KNOWLEDGE OF HYPERTENSION AND ITS PREVENTIVE STRATEGIES AMONG RESPONDENTS

Most respondents (86.6%) had good knowledge of hypertension and its preventive strategies while only (13.4%) had poor knowledge.

TABLE 4A: SOCIODEMOGRAPHIC CHARACTERISTICS AND KNOWLEDGE OF

VARIABLE	KNOWLEDGE		TEST	p-value
	GOOD	POOR		
	FREQUENCY (%)			
Age groups			**Fisher's Exact**	0.084
16-20	121 (81.2)	28 (18.8)	6.197	
21-25	132 (90.4)	14 (9.6)		
26-30	35 (92.1)	3 (7.9)		
31-35	0 (0.0)	4 (100.0)		
Sex			**Chi-square**	0.070
Male	166 (83.8)	32 (16.2)	3.273	
Female	126 (90.6)	13 (9.4)		
Religion			**Fisher's Exact**	0.032 #
Christianity	271 (88.0)	37 (12.0)	9.835	
Islam	18 (72.0)	7 (28.0)		
African traditional religion	2 (100.0)	0 (0.0)		
Atheism	0 (0.0)	1 (100)		
None	0 (0.0)	1 (100)		
Faculty			**Chi-square**	0.037 #
Agriculture	30 (78.9)	8 (21.1)	14.92	
Arts	34 (87.2)	5 (12.8)		
Basic Medical sciences	42 (87.5)	6 (12.5)		
Engineering	30 (78.9)	8 (21.1)		
Life sciences	37 (90.2)	4 (9.8)		
Management sciences	32 (78.0)	9 (22.0)		
Medicine	51 (100.0)	0 (0.0)		
Social sciences	36 (87.8)	5 (12.2)		
Marital status			**Fisher's Exact**	0.740
Single	282 (86.2)	45 (13.8)	1.256	
Married	7 (100.0)	0(0.0)		
Cohabiting	0 (0.0)	2(100.0)		
Divorced	1 (100.0)	0 (0.0)		

HYPERTENSION AND ITS PREVENTIVE STRATEGIES

 # Statistically significant

Table 4A shows the relationship between the sociodemographic characteristics of the respondents and their knowledge of hypertension and its preventive strategies. A large proportion of respondents 132 (90.4%) who were aged between 21 to 25 years had good knowledge of hypertension and its preventive strategies while all the respondents 4 (100.0%) whose ages fell between 31 to 35 years had poor knowledge of hypertension and its preventive strategies. The observed p-value for the association between the respondents' ages and knowledge was above the level required for significance. 166 (83.8%) of respondents who were males had good knowledge of hypertension while 126 (90.6%) of respondents who were females also had good knowledge of hypertension and its preventive strategies although the p-value of the association of their sex and knowledge failed to indicate any statistical significance.

A significant number of respondents 271 (88.0%) who practiced Christianity had good knowledge of hypertension, 18 (72.0%) of the respondents who practiced Islam had good knowledge of hypertension and its preventive strategies while all the respondents 2 (100.0%) who practiced African Traditional religion had good knowledge of hypertension. Furthermore, 1 (100.0%) of the respondents who practiced atheism and no religion had poor knowledge of hypertension and its preventive strategies respectively. The p-value of the association between the religions the respondents practice and their knowledge achieved significance. Majority 30 (78.9%) of the respondents from the faculties of Agriculture and Engineering had good knowledge of hypertension and its preventive strategies. Also, a bulk of respondents from the faculties of Arts 34 (87.2%), Basic medical sciences 42 (87.5%), Life sciences 37 (90.2%), Social sciences 36 (87.8%), and Management sciences 32 (78.0%) had good knowledge of hypertension and its preventive strategies. All the representatives from the faculty of Medicine

51 (100.0%) had good knowledge of hypertension. The association between their faculties and knowledge had no statistical significance as indicated by the p-value. A majority of the respondents 282 (86.2%) who were single had good knowledge of hypertension. The total respondents who were married 7 (100.0%) and divorced 1 (100.0%) also had good knowledge while the respondent who was divorced 1 (100.0%) had poor knowledge of hypertension and its preventive strategies. The p-value of the relationship between respondents' marital status and knowledge did not achieve statistical significance.

TABLE 4B: SOCIODEMOGRAPHIC CHARACTERISTICS AND KNOWLEDGE OF HYPERTENSION AND ITS PREVENTIVE STRATEGIES

VARIABLE	KNOWLEDGE		TEST	p-value
	GOOD	POOR		
	FREQUENCY (%)			
Year of study			**Chi-square**	0.002 #
100	45 (81.8)	10 (18.2)	19.101	
200	41 (78.8)	11 (21.2)		
300	81 (81.0)	19 (19.0)		
400	66 (95.7)	3 (4.3)		
500	10 (83.3)	2 (16.7)		
600	49 (100.0)	0 (0.0)		
Primary caregiver			**Fisher's exact**	
Both parents	214 (84.9)	38 (15.1)	3.688	0.594
Father only	12 (92.3)	1 (7.7)		
Mother only	42 (87.5)	6 (12.5)		
Guardian/Relatives	15 (88.2)	2 (11.8)		
Self-supporting	16 (100.0)	0 (0.0)		
Husband	1 (100)	0 (0.0)		
Monthly allowance/Income			**Fisher's exact**	0.928
Below 20,000	85 (83.3)	17 (16.7)	1.457	
21,000 – 40,000	80 (88.9)	10 (11.1)		
41,000 – 60,000	60 (87.0)	9 (13.0)		
61,000 – 80,000	26 (86.7)	4 (13.3)		
Above 100,000	31 (88.6)	4 (11.4)		

Statistically significant

Table 4B shows the relationship between the social demographic characteristics and the knowledge of hypertension and its preventive strategies. Majority of the respondents 45 (81.8%), and 41 (78.8%) who were in their first and second year of study had good knowledge of hypertension respectively. Most of the respondents 81 (81.0%), 66 (95.7%) and 10 (83.3%) who were in their third, fourth, and fifth year of study in that order also had good knowledge of hypertension and its preventive strategies. The association between their year of study and their knowledge achieved statistical significance. All the respondents 49 (100.0%) who were in their sixth year of study had good knowledge. A predominant number of the respondents 214 (84.9%) who had both parents as their primary caregivers had good knowledge of hypertension. 12 (92.3%), 42 (87.5%), and 15 (88.2%) of respondents who had their fathers only, mothers only, and their guardians or relatives as their primary caregivers respectively had good knowledge of hypertension. All the respondents who were self-supporting 16 (100.0%) and had their husband 1 (100.0%) also had good knowledge. The association of their primary caregivers and knowledge has no statistical significance. Majority of the respondents whose monthly income or allowance fell below 20, 000 naira 85 (83.3%) had good knowledge, those whose income fell between 21, 000 naira to 40, 000 naira 80 (88.9%), 41, 000 to 60, 000 naira 60 (87.0%), 61, 000 to 80, 000 naira 26 (86.7%) also had good knowledge. Furthermore, a bulk of the respondents 31 (88.6%) whose monthly allowance was above 100, 000 naira also had good knowledge of hypertension and its preventive strategies. The p-value for the association between their monthly allowance and their knowledge did not achieve statistical significance.

Table 5: LOGISTICS REGRESSION ANALYSIS FOR KNOWLEDGE OF HYPERTENSION AND ITS PREVENTIVE STRATEGIES

PREDICTOR	B (regression coefficient)	ODDS RATIO	95% CI FOR OR		p-value
			LOWER	UPPER	
Age	0.657	1.928	1.149	3.235	0.013 #
Sex					
Male***		1			
Female	0.625	1.868	0.942	3.706	0.074
Religion					
Christians***		1			
Non-Christians	-1.146	0.318	0.120	0.843	0.021 #
Faculty					
Arts***		1			
Basic medical sciences	0.570	1.769	0.518	6.033	0.362
Engineering	0.819	2.269	0.690	7.460	0.177
Medicine	0.084	1.088	0.354	3.343	0.883
Management sciences	0.864	2.373	0.649	8.671	0.191
Life sciences	0.153	1.165	0.385	3.529	0.787
Agriculture	19.980	475527114.4	0.000	0.000	0.997
Social sciences	0.735	2.085	0.609	7.138	0.242
Year of study					
100***		1			
200	-0.188	0.828	0.319	2.153	0.699
300	-0.054	0.947	0.406	2.212	0.901
400	1.587	4.889	1.274	18.759	0.021 #
500	0.105	1.111	0.210	5.877	0.901
600	19.699	3589909.5	0.000	0.000	0.997
Marital status					
Never married***		1			
Ever married	19.361	255973126.5	0.000	0.000	0.999
Monthly income/allowance					
Below 60,000 ***		1			
Above 60,000	0.175	1.191	0.546	2.598	0.660

***** Reference category, # Statistically significant, CI- Confidence interval, OR- Odds ratio**

Table 5 shows the logistics regression analysis of sociodemographic characteristics and knowledge of hypertension and its preventive strategies. The regression analysis revealed several significant predictors of the outcome. Age was associated with a notable increase in odds, with a coefficient of 0.657 and an odds ratio of 1.928, indicating that each additional year of age nearly doubled the odds of the outcome, a result that was statistically significant with a p-value of 0.013. Sex showed a trend where males had higher odds (odds ratio of 1.868) compared to females, but this association was not statistically significant (p-value of 0.074). Religion demonstrated a significant effect, with non-Christians having a reduced odds ratio of 0.318 compared to Christians, supported by a p-value of 0.021. Faculty affiliation also had a pronounced impact, with various faculties showing exceptionally high odds ratios, some exceeding 475 million, and all with p-values of 0.000, indicating a very strong association with the outcome. The year of study further revealed significant variations, with odds ratios ranging widely and several p-values at 0.000, underscoring its substantial influence. Marital status showed an extremely high odds ratio of 255,973,126.5 for ever-married individuals compared to those never married, but the p-value of 0.999 suggested this result was not statistically significant. Monthly income/allowance had a coefficient of 0.175 and an odds ratio of 1.191, indicating a slight increase in odds for higher income levels, though this association was not statistically significant with a p-value of 0.660. Overall, the analysis highlighted significant associations for age, religion, and faculty, while sex, marital status, and income did not show significant effects.

4.3 SECTION C: ATTITUDE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION

Table 6: ATTITUDE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION

VARIABLE	Strongly agree n (%)	Agree n (%)	Uncertain n (%)	Disagree n (%)	Strongly disagree n (%)
High blood pressure is preventable	217 (51.2)	179 (42.2)	25 (5.9)	1 (0.2)	2 (0.5)
Stopping of smoking and alcohol helps to prevent hypertension	185 (43.6)	161 (38.0)	60 (14.2)	13 (3.1)	5 (1.2)
Avoiding extra added salts in your diet is good	209 (49.3)	165 (38.9)	33 (7.8)	9 (2.1)	8 (1.9)
Having whole fruits is better than having deserts and sweets	226 (53.3)	159 (37.5)	30 (7.1)	9 (2.1)	0 (0.0)
Blood pressure should be checked from time to time	279 (65.8)	131 (30.9)	6 (1.4)	7 (1.7)	1 (0.2)
Engaging in regular physical exercises is good	268 (63.2)	141 (33.3)	9 (2.1)	3 (0.7)	3 (0.7)
It is good to include green leafy vegetables in your daily diet	265 (62.5)	138 (32.5)	17 (4.0)	3 (0.7)	1 (0.2)
Lack of proper sleep and rest can increase blood pressure	229 (54.0)	159 (37.5)	29 (6.8)	5 (1.2)	2 (0.5)

Table 6 describes the attitude of respondents towards hypertension prevention. 217 (51.2%) of the respondents strongly agreed that hypertension is a preventable disease while only 1 (0.2%) of the respondents disagreed. Majority of the respondents 185 (43.6%) expressed strong agreement on the fact that stopping alcohol and smoking helps in the prevention of hypertension while 5 (1.2%) of the respondents strongly disagreed. Analysis of the respondents' attitude towards hypertension also revealed that 209 (49.3%) of the respondents had a strong conviction that avoiding extra added salts in their diet helps prevent hypertension while 8 (19%) strongly disagreed. 226 of the respondents constituting 53.3% of them strongly acknowledged that it is better to have fruits than eat deserts and sweets in a bid to prevent hypertension. Furthermore, more than half of the respondents 279 (65.8%) fully concurred that blood pressure should be checked regularly while only 1 (0.2%) of the respondents firmly opposed this. Two third of the respondents 268 (63.2%) fully agreed that engaging regularly in physical exercises is good practice while 3 (0.7%) of the respondents disagreed and strongly disagreed with this. In addition, 265 (62.5%) of the respondents completely agreed that adding green leafy vegetables to their daily diet is good while only 1 (0.2%) of the respondents strongly opposed this. 229 of them, making up about 54.0% of the respondents strongly acknowledged that lack of proper sleep and adequate rest can contribute to increasing their blood pressure 2 (0.5%) strongly disagreed.

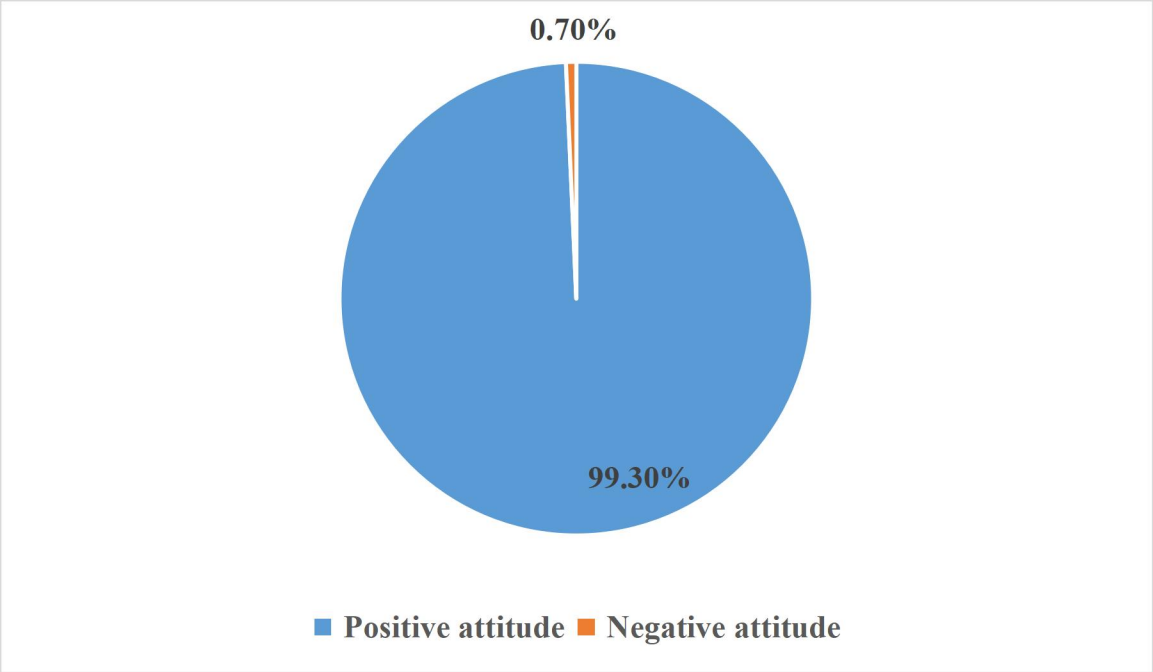

FIGURE 2: OVERALL ATTITUDE TOWARDS HYPERTENSION PREVENTION AMONG RESPONDENTS

A majority of the respondents 421 (99.3%) had a positive attitude towards hypertension prevention while only 3 (0.7%) of the respondents had a poor attitude towards hypertension prevention.

TABLE 7A: SOCIO-DEMOGRAPHIC CHARACTERISTICS AND ATTITUDE TOWARDS HYPERTENSION PREVENTION

VARIABLE	ATTITUDE		TEST	p-value
	POSITIVE	NEGATIVE		
	FREQUENCY (%)			
Age groups			**Fisher's Exact**	1.000
16-20	207 (99.0)	2 (1.0)	2.083	
21-25	168 (99.4)	1 (0.6)		
26-30	41 (100.0)	0 (0.0)		
31-35	5 (100.0)	0 (0.0)		
Sex			**Fisher's Exact**	0.265
Male	241 (98.8)	3 (1.2)	2.229	
Female	180 (100.0)	0 (0.0)		
Religion			**Fisher's Exact**	1.000
Christianity	382 (99.2)	3 (0.8)	8.246	
Islam	34 (100.0)	0 (0.0)		
African traditional religion	2 (100.0)	0 (0.0)		
Atheism	2 (100.0)	0 (0.0)		
None	1 (100.0)	0 (0.0)		
Faculty			**Fisher's Exact**	1.000
Agriculture	53 (100.0)	0 (0.0)	5.009	
Arts	52 (98.1)	1 (1.9)		
Basic Medical sciences	52 (98.1)	1 (1.9)		
Engineering	53 (100.0)	0 (0.0)		
Life sciences	53 (100.0)	0 (0.0)		
Management sciences	53 (100.0)	0 (0.0)		
Medicine	52 (98.1)	1 (1.9)		
Social sciences	53 (100.0)	0 (0.0)		
Marital status			**Fisher's Exact**	0.029 #
Single	410 (99.5)	2 (0.5)	14.545	
Married	8 (100.0)	0 (0.0)		
Cohabiting	1 (50.0)	1 (50.0)		
Divorced	2 (100.0)	0 (0.0)		

 # Statistically significant

Table 7A shows the relationship between the socio-demographic characteristics of respondents and their attitude towards hypertension prevention. Most of the respondents 168 (99.4%) aged between 21 to 25 years had a positive attitude towards hypertension prevention which was closely followed by those aged between 16 to 20 years 207 (99.0%) who also had a positive attitude towards hypertension prevention. All respondents with ages ranging from 26 to 30, 41 (100.0%) and 31 to 35 years, and 5 (100.0%) had a positive attitude towards hypertension prevention respectively. The relationship between the age groups and attitude towards hypertension prevention was found to not be statistically significant. All female respondents 180 (100.0%) had a positive attitude towards hypertension prevention while 241 (98.8%) of the male respondents had a positive attitude towards hypertension prevention. The association between the sex and attitude of the respondents was not statistically significant. Additionally, 382 (99.2%) of respondents who practiced Christianity had a positive attitude towards hypertension prevention. All the respondents who practiced Islamic religion 34 (100.0%), Atheism 2 (100.0%), and African traditional religion 2 (100%) had a positive attitude towards hypertension prevention respectively. The only respondent 1 (100.0%) who practiced no form of religion also had a positive attitude towards hypertension prevention. There was no associable statistical significance between the religion the respondents practiced and their attitude.

All respondents 53 (100.0) from the faculties of Agriculture, Engineering, Life sciences, Management sciences, and Social sciences had a positive attitude towards hypertension prevention respectively while only 52 (98.1) from the faculties of Arts, Basic medical sciences, and Medicine had a positive attitude towards hypertension prevention. There was no significant statistical relationship between respondents' faculties and their attitudes. 410 (99.5%) of single respondents had a positive attitude towards hypertension prevention, all the married respondents

8 (100.0%) and divorced respondents 2 (100.0%) also had a positive attitude. Only 1 (50.0%) of the cohabiting respondents had a positive attitude towards hypertension prevention. The p-value

VARIABLE	ATTITUDE		TEST	p-value
	POSITIVE	NEGATIVE		
	FREQUENCY (%)			
Year of study			**Fisher's Exact**	0.134
100	70 (98.6)	1 (1.4)	7.050	
200	71 (98.6)	1 (1.4)		
300	134 (100.0)	0 (0.0)		
400	81 (100.0)	0 (0.0)		
500	16 (94.1)	1 (5.9)		
600	49 (100.0)	0 (0.0)		

for the relationship between respondents' marital status and their attitude also had no statistical significance.

Primary caregiver	309 (99.4)	2 (0.6)	**Fisher's Exact**	0.606
Both parents	18 (100.0)	0 (0.0)	9.376	
Father only	52 (98.1)	1 (1.9)		
Mother only	19 (100.0)	0 (0.0)		
Guardian/Relatives	21 (100.0)	0 (0.0)		
Self-supporting Husband	1 (100.0)	0 (0.0)		
Monthly allowance/Income			**Fisher's Exact**	1.000
Below 20,000	134 (99.3)	1 (0.7)	2.297	
21,000 – 40,000	119 (99.2)	1 (0.8)		
41,000 – 60,000	84 (98.8)	1 (1.2)		
61,000 – 80,000	34 (100.0)	0 (0.0)		
Above 100,000	38 (100.0)	0 (0.0)		

TABLE 7B: SOCIO-DEMOGRAPHIC CHARACTERISTICS AND ATTITUDE TOWARDS HYPERTENSION PREVENTION

Table 7B shows the association between the socio-demographic characteristics and the attitude of respondents towards hypertension prevention. Most of the respondents 70 (98.6%), 71 (98.6%), 16 (94.1%) who were in their first year. Second year and fifth year of study had a positive attitude towards hypertension prevention while all the respondents 134 (100.0%), 81 (100.0%), and 49 (100.0%) in their third, fourth, and sixth year of study respectively had a positive attitude towards hypertension prevention, although the p-value for the relationship

between their attitude and their year of study was not statistically significant. Majority of the respondents 309 (99.4%) who had both parents as their primary caregivers had a positive attitude towards hypertension prevention. 52 (98.1%) of the respondents who had their mothers only as their primary caregivers had a positive attitude. All the respondents who had fathers only 18 (100.0%)/ Guardians/Relatives 19 (100.0%), self-supporting 21 (100.0%), and husband 1 (100.0%) has their primary caregivers also had a positive attitude towards hypertension prevention. The association between their primary caregivers and attitude towards hypertension prevention was not statistically significant. Regarding monthly allowance or income, students from all income brackets exhibited very high positive attitudes towards hypertension prevention, with percentages ranging from 98.8% to 100%. This result suggests that financial status does not significantly impact students' attitudes towards hypertension prevention. The Fisher's Exact Test for this variable yielded a p-value of 1.000, confirming that there were no significant differences in attitudes related to monthly allowance or income.

Table 8: LOGISTICS REGRESSION ANALYSIS FOR ATTITUDE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION

PREDICTOR	B (regression coefficient)	ODDS RATIO	95% CI FOR OR		p-value
			LOWER	UPPER	
Age	-0.190	0.827	0.517	1.325	0.430
Sex					
Male***		1			
Female		16.817	0.000	0.000	0.996
Religion					
Christians***		1			
Non-Christians	-16.356	0.000	0.000	0.000	0.998
Faculty					
Arts***		1			
Basic medical sciences	0.000	1.000	0.000	0.000	1.000
Engineering	17.252	31066832.53	0.000	0.000	0.998
Medicine	17.252	31066832.53	0.000	0.000	0.998
Management sciences	0.000	1.000	0.000	0.000	1.000
Life sciences	0.000	1.000	0.000	0.000	1.000
Agriculture	0.000	1.000	0.000	0.000	1.000
Social sciences	17.252	31066832.53	0.000	0.000	0.998
Year of study					
100***		1			
200	16.954	23078218.62	0.000	0.000	0.998
300	16.940	22753173.29	0.000	0.000	0.998
400	0.000	1.000	0.000	0.000	1.000
500	0.000	1.000	0.000	0.000	1.000
600	18.430	100967206.5	0.000	0.000	0.997
Marital status					
Never married***		1			
Ever married	-16.283	0.000	0.000	0.000	0.999
Monthly income/allowance					
Below 60,000 ***		1			
Above 60,000	-16.481	0.000	0.000	0.000	0.997

***** Reference category, CI- Confidence interval, OR- Odds ratio**

Table 8 shows the logistics regression analysis of the attitude of respondents towards hypertension prevention. The regression analysis revealed several insights into the predictors of the outcome. Age had a coefficient of -0.190, with an odds ratio of 0.827, indicating that each additional year of age was associated with a 17.3% decrease in the odds of the outcome, though this effect was not statistically significant (p-value = 0.430). Being male was linked to a significantly higher odds ratio of 16.817 compared to being female, with an insignificant p-value of 0.996, suggesting that males were not considerably more likely to exhibit the outcome. The religion variable showed a large negative coefficient of -16.356 and an odds ratio of 0, implying minimal change in odds between non-Christians and Christians, with a p-value of 0.998 indicating non-significance. Faculty members from various departments, relative to the Arts reference group, demonstrated extremely high odds ratios, with some exceeding 30 million and p-values ranging from 0.998 and 1.000, indicating no significant associations with the outcome. The year of study also displayed significant variations, with odds ratios ranging from very high to moderate values, all with p-values between 0.997 and 1.000. Marital status showed a coefficient of -16.283 and an odds ratio of 0.999, suggesting slightly lower odds for those who were ever married compared to those who were never married, though this difference was not statistically significant (p-value = 0.999). Lastly, monthly income/allowance had a coefficient of -16.481 and an odds ratio of 0.997, indicating a minimal decrease in odds for those earning above 60,000 naria compared to those earning below, with a non-significant p-value of 0.997.

TABLE 9: KNOWLEDGE OF HYPERTENSION AND ATTITUDE TOWARDS HYPERTENSION

VARIABLE	ATTITUDE		TEST	p-value
	POSITIVE	NEGATIVE		
	FREQUENCY (%)			
Knowledge of hypertension			**Fisher's Exact**	1.000
Good	289 (86.5)	3 (100.0)	0.466	
Poor	45 (13.5)	0 (0.0)		

Table 9 shows the relationship between respondents' knowledge of hypertension and its preventive strategies and their attitude towards it. Three of the respondents making up 100.0% of those good knowledge but had a negative attitude towards hypertension prevention. 289 (86.5%) of respondents who had good knowledge also had a positive attitude towards hypertension prevention while 45 (13.5%) had poor knowledge of hypertension and its preventive strategies but nevertheless had a positive attitude towards it. The relationship between respondents' knowledge and attitude towards prevention of hypertension was not significant statistically.

4.4 SECTION D: PRACTICE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION

TABLE 10A: PRACTICE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION AMONG RESPONDENTS

VARIABLE	FREQUENCY	PERCENT (%)
Ever checked blood pressure (n=424)		
Yes	258	60.8
No	166	39.2
The last time blood pressure was checked (n=258)		
This month	57	13.4
In the last six months	116	27.4
Before the last six months	85	20.0
Diet mostly consumed (n=424)		
Both vegetarian and non-vegetarian	294	69.3
Non-vegetarian	78	18.4
Vegetarian	26	6.1
Eggetarian	26	6.1
How often are vegetables not added to meals (n=424)		
Daily	71	16.7
2-3 days in a week	121	28.5
Weekly	98	23.1
Monthly	52	12.3
Rarely	77	18.2
Never	5	1.2
How often junk food is eaten (n=424)		
Daily	141	33.3
2-3 days in a week	108	25.5
Weekly	81	19.1
Monthly	17	4.0
Rarely	70	16.5
Never	7	1.7
Engages in physical exercises (n=424)		
Yes	304	71.7
No	120	28.3
How regularly physical exercises is engaged in (n=304)		
	97	22.9
Daily	78	18.4
2-3 days in a week	85	20.0
Weekly	21	5.0
Monthly	23	5.4
Rarely		

Table 10A shows the practice of respondents towards hypertension prevention. About two-thirds of the respondents, 258 (60.8%) have measured their blood pressure at least once in their lifetime. Among the respondents who have previously checked their blood pressure, 116 constituting 27.4% of them, checked it within the last six months, while 57 (13.4%) and 85 (20.0%) of the respondents checked their blood pressure this month and before the last six months respectively. 294 (69.3%) of the respondents majorly consumed both vegetarian and non-vegetarian diets, and 78 (18.4%) of the respondents' main diet was non-vegetarian. 26 (6.1%) of the respondents fed mostly on vegetarian and eggeterian diets in that order. The respondents were also asked how often they did not add vegetables to their meals, 121 (28.5%) of them did not add 2-3 days a week, and 71 (16.7%) of them did not add vegetables to their meals daily. 98 of the respondents making up about 23.1% of them did not add vegetables to their meals weekly. 52 (12.3%), 77 (18.2%), and 5 (1.2%) of the respondents did not add vegetables to their meals monthly, rarely, and never respectively. Junk food was eaten daily by 141 of the respondents constituting 33.3% of them, 108 (25.5%) of them highlighted that they ate junk food 2-3 days a week, and 81 (19.1%) noted that they ate junk food weekly. 17 (4.0%), 70 (16.5%) and 7 (1.7%) affirmed that they ate junk food monthly, rarely, and never in that order. A majority of the respondents 304 (71.7%) engaged in physical exercises. Of those, 97 (22.9%) exercised daily, 78 (18.4%) 2-3 days a week, 85 (20.0%) weekly, 21 (5.0%) monthly, and 23 (5.4%) of respondents rarely engaged in physical exercises.

VARIABLE	FREQUENCY	PERCENT (%)
Involves in smoking habits (n=424)		
Yes	25	5.9
No	399	94.1
Frequency of smoking (n=25)		
Daily	6	1.4
2-3 days in a week	7	1.7
Weekly	3	0.7
Monthly	2	0.5
Rarely	7	1.7
Number of sticks smoked on an average day (n=25)		
1 – 5	18	4.2
6 – 10	3	0.7
11 – 15	1	0.2
16 – 20	1	0.2
More than 20	2	0.5
Consumption of alcohol (n=424)		
Yes	100	23.6
No	324	76.4
Regularity of alcohol consumption (n=100)		
Daily	5	1.2
2-3 days in a week	3	0.7
Weekly	9	2.1
Monthly	9	2.1
Rarely	74	17.5
Units of alcohol consumed on an average week		
1 – 5	83	19.6
6 – 10	3	0.7
11 – 15	11	2.6
16 – 20	2	0.5
More than 20	1	0.2

TABLE 10B: PRACTICE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION AMONG RESPONDENTS

Table 10B shows the practice of respondents towards hypertension prevention. A bulk of the respondents 399 (94.1%) noted that they did not smoke but 25 (5.9%) of them were involved in smoking habits with 6 (1.4%) smoking daily, 7 (1.7%) smoking 2 – 3 days in a week, 3 (0.7%) smoking weekly 2 (0.5%) smoking monthly and rarely 7 (1.7%). Of the respondents who smoked, 18 (4.2%) of them smoked 1 – 5 sticks on an average day, 3 (0.7%) of them smoked 6 – 10 sticks on an average day, 11 – 15 sticks were smoked by 1 (0.2%) of them, 16 – 20 sticks by 1 (0.2%) of them and more than 20 sticks was smoked by 2 (0.5%) of them on an average day.

The alcohol consumption pattern of the respondents was also assessed and a majority of the respondents 324 (76.4%) did not consume alcohol while 100 (23.6%) of them consumed alcohol with 5 (1.2%) of them consuming alcohol daily, 3 (0.7%) consuming 2 – 3 days in a week, weekly and monthly by 9 (2.1%) of them respectively while 17 (17.5%) of them rarely consuming alcohol.

Respondents 83 (19.6%) who consumed alcohol noted that they consumed 1 – 5 units on an average week, 3 (0.7%) of them took 6 – 10 units of alcohol, 11 (2.6%) took 11 – 15 units of alcohol on an average week, 2 (0.5%) consumed 16 – 20 units while only 1 (0.2%) of the respondents consumed more than 20 units of alcohol on an average week.

FIGURE 3: OVERALL PRACTICE TOWARDS HYPERTENSION PREVENTION AMONG RESPONDENTS

Most of the respondents 409 (95.5%) had good practice towards hypertension prevention while 15 (3.5%) of the respondents had poor practice towards hypertension prevention.

VARIABLE	PRACTICE		TEST	p-value
	GOOD	POOR		
	FREQUENCY (%)			
Age groups			**Fisher's Exact**	0.780
16-20	201 (96.2)	8 (3.8)	1.046	
21-25	164 (97.0)	5 (3.0)		
26-30	39 (95.1)	2 (4.9)		
31-35	5 (100.0)	0 (0.0)		
Sex			**Chi-square**	0.208
Male	233 (95.5)	11 (4.5)	1.586	
Female	176 (97.8)	4 (2.2)		
Religion			**Fisher's Exact**	0.103
Christianity	374 (97.1)	11 (2.9)	9.368	
Islam	30 (88.2)	4 (11.8)		
African traditional religion	2 (100.0)	0 (0.0)		
Atheism	2 (100.0)	0 (0.0)		
None	1 (100.0)	0 (0.0)		
Faculty			**Fisher's Exact**	0.025 #
Agriculture	52 (98.1)	1 (1.9)	12.824	
Arts	48 (90.6)	5 (9.4)		
Basic Medical sciences	49 (92.5)	4 (7.5)		
Engineering	50 (94.3)	3 (5.7)		
Life sciences	53 (100.0)	0 (0.0)		
Management sciences	51 (96,2)	2 (3.8)		
Medicine	53 (100.0)	0 (0.0)		
Social sciences	53 (100.0)	0 (0.0)		
Marital status			**Fisher's Exact**	1.000
Single	397 (96.4)	15 (3.6)	2.059	
Married	8 (100.0)	0 (0.0)		
Cohabiting	2 (100.0)	0 (0.0)		
Divorced	2 (100.0)	0 (0.0)		

TABLE 11A: SOCIO DEMOGRAPHIC CHARACTERISTICS AND PRACTICE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION

 # Statistically significant

Table 11A shows the association between the sociodemographic characteristics of respondents and their practice towards hypertension prevention. The respondents who were aged between 16 – 20 years 201 (96.2%), 21 – 25 years 164 (97.0%), and 26 – 30 years (95.1%) respectively had good practice towards hypertension prevention. All the respondents 5 (100.0%) whose ages fell between 31 – 35 years also had good practice. The impact of age on respondents' practice towards hypertension prevention exceeded the threshold for statistical significance. A large number of participants 233 (95.5%) who were males and females 176 (97.8%) had good practices towards hypertension prevention although the correlation between their sexes and practices was not statistically significant. A substantial proportion of respondents who were Christians 374 (97.1%) and Muslims 30 (88.2%) had good practice towards hypertension prevention while the total number of respondents who practiced African traditional religion 2 (100.0%), Atheism 2 (100.0%) and no religion at all 1 (100.0%) also had good practice towards hypertension prevention. The role of religion in shaping the practices related to hypertension prevention among the respondents was statistically insignificant. Respondents 52 (98.1%) from the Faculty of Agriculture, 48 (90.6%) from the Faculty of Arts, 49 (92.5%) from the Faculty of Basic Medical Sciences, 50 (94.3%) from the Faculty of Engineering, and 51 (96.2%) from the Faculty of Management sciences all had poor practice. All representatives of the sample from the Faculty of Life Sciences 53 (100.0%), Faculty of Medicine 53 (100.0%), and Faculty of Social Sciences 53 (100.0%) had good practice towards hypertension. The p-value for the correlation between respondents' faculties and their practice achieved significance. The larger share of respondents who were single 397 (96.4%) had good practice while all the respondents who were married 8 (100.0%), cohabiting 2 (100.0%) and divorced 2 (100.0%) also had good practice

towards hypertension prevention. The association between their marital status and practice was not statistically significant.

VARIABLE	PRACTICE		TEST	p-value
	GOOD	POOR		
	FREQUENCY (%)			
Year of study			**Fisher's Exact**	0.691
100	67 (94.4)	4 (5.6)	2.873	
200	68 (94.4)	4 (5.6)		
300	131 (97.8)	3 (2.2)		
400	78 (96.3)	3 (3.7)		
500	17 (100.0)	0 (0.0)		
600	48 (98.0)	1 (2.0)		
Primary caregiver			**Fisher's Exact**	0.551
Both parents	299 (96.1)	12 (3.9)	5.906	
Father only	18 (100.0)	0 (0.0)		
Mother only	52 (98.1)	1 (1.9)		
Guardian/Relatives	19 (100.0)	0 (0.0)		
Self-supporting	19 (90.5)	2 (9.5)		
Husband	1 (100.0)	0 (0.0)		
Friends/Family	1 (100.0)	0 (0.0)		
Monthly allowance/Income			**Fisher's Exact**	0.616
Below 20,000	129 (95.6)	6 (4.4)	3.179	
21,000 – 40,000	116 (96.7)	4 (3.3)		
41,000 – 60,000	84 (98.8)	1 (1.2)		
61,000 – 80,000	32 (94.1)	2 (5.9)		
Above 100,000	36 (94.7)	2 (5.3)		

TABLE 11B: SOCIO DEMOGRAPHIC CHARACTERISTICS AND PRACTICE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION

Table 11B shows the correlation between the practice of respondents and their socio-demographic traits. A large portion of the sample who were in their first year of study 67 (94.4%), second year of study 68 (94.4%), third year of study 131 (97.8%), fourth year of study 78 (96.3%) and sixth year of study 48 (98.0%) correspondingly had good practice towards hypertension prevention while all the respondents 17 (100.0%) who were in their fifth year of study, had good practice towards hypertension prevention. The connection between their year of study and hypertension-related practice had no statistical significance. Most participants who had both parents 299 (96.1%) and Mothers only 52 (98.1) as their primary caregivers including 19 (90.5%) who were self-supporting had good practice toward hypertension prevention. All respondents who noted their Father only 18 (100.0%), Guardians and relatives 19 (100.0%), Husband 1 (100.0%) and Friends and family 1 (100.0%) as their primary caregivers also had good practice. The interplay between their socio and demographic profiles and their practice towards hypertension prevention did not meet the criteria for statistical significance. A large portion of the respondents 129 (95.6%) whose Monthly allowance or income was below 20, 000 naira, fell between 21, 000 – 40, 000 naira 116 (96.7%), 41, 000 – 60, 000 naira 84 (98.8%), 61, 000 – 80, 000 naira 32 (94.1%) and above 100, 000 naira all had good practice towards hypertension. The p-value for the relationship between their monthly allowance and practice exceeded the threshold for statistical significance.

PREDICTOR	B (regression coefficient)	ODDS RATIO	95% CI FOR OR		p-value
			LOWER	UPPER	
Age	0.058	1.060	0.504	2.227	0.879
Sex					
Male***		1			
Female	0.731	2.077	0.651	6.633	0.217
Religion					
Christians***		1			
Non-Christians	-1.386	0.250	0.076	0.828	0.023 #
Faculty					
Arts***		1			
Basic medical sciences	-1.689	0.185	0.021	1.637	0.129
Engineering	-1.446	0.236	0.025	2.182	0.236
Medicine	-1.138	0.321	0.032	3.185	0.331
Management sciences	17.252	31066823.90	0.000	0.000	0.998
Life sciences	-0.713	0.490	0.043	5.578	0.566
Agriculture	17.252	31066823.90	0.000	0.000	0.998
Social sciences	17.252	31066823.90	0.000	0.000	0.998
Year of study					
100***		1			
200	0.015	0.984	0.244	4.226	0.984
300	0.958	0.218	0.567	11.987	0.218
400	0.440	0.574	0.335	7.184	0.574
500	18.384	0.998	0.000	0.000	0.998
600	1.053	0.353	0.310	0.310	0.353
Marital status					
Never married***		1			
Ever married	17.992	60732136.95	0.000	0.000	0.999
Monthly income/allowance					
Below 60,000 ***		1			
Above 60,000	0.402	1.495	0.464	4.819	0.500

Table 12: LOGISTICS REGRESSION ANALYSIS FOR PRACTICE OF RESPONDENTS TOWARDS HYPERTENSION PREVENTION

***** Reference category, # Statistically significant, CI- Confidence interval, OR- Odds ratio**

Table 12 shows the logistics regression analysis for the practices of respondents towards hypertension prevention. Age was associated with an odds ratio of 1.060, reflecting a modest increase in the odds of the outcome with each additional year of age, though this was not statistically significant with a p-value of 0.879. The sex variable indicated that males had an odds ratio of 2.077 compared to females, but this association was also not statistically significant (p-value of 0.217). Religion showed a significant effect, with non-Christians having a reduced odds ratio of 0.250 compared to Christians, and this result was statistically significant with a p-value of 0.023. Faculty affiliation revealed varied results, with odds ratios ranging from near 1 to over 31 million for some faculties, and several faculties showed statistically significant associations with p-values of 0.000. Year of study had a significant impact on the outcome, with odds ratios and p-values indicating substantial variations across different years. Marital status demonstrated an extremely high odds ratio of 60,732,136.95 for ever-married individuals compared to those never married, although the p-value of 0.999 indicated that this result was not statistically significant. Monthly income/allowance had an odds ratio of 1.495, showing a slight increase in odds for higher income levels, but this was not statistically significant with a p-value of 0.500. Overall, significant predictors included religion and several faculties, while age, sex, marital status, and income did not show significant effects.

4.5 SECTION E: WILLINGNESS OF RESPONDENTS TO CHANGE BEHAVIOUR

TABLE 13: WILLINGNESS OF RESPONDENTS TO CHANGE BEHAVIOUR

WILLINGNESS TO CHANGE BEHAVIOUR	FREQUENCY (n=424)	PERCENT (%)
Willing to reduce daily salt intake		
Yes	377	88.9
No	47	11.1
Inclined to incorporate more fruits and leafy vegetables into diet		
Yes	415	97.9
No	9	2.1
Open to engage in more regular physical activity		
Yes	387	91.3
No	37	8.7
Willing to reduce alcohol consumption to the barest minimum		
Yes	380	89.6
No	44	10.4
Open to more frequent blood pressure checks		
Yes	377	88.9
No	47	11.1
Willing to seek guidance from health care professionals		
Yes	401	94.6
No	23	5.4

Table 13 shows the willingness of respondents to adopt healthier lifestyle behaviors. The larger share of the respondents 377 (88.9%) expressed a willingness to reduce their daily salt consumption and openness to having their blood pressure checked more frequently whereas 47 (11.1%) were reluctant to reduce their daily salt intake and have more frequent blood pressure measurements respectively. A majority of participants 415 (97.9%) indicated readiness to incorporate more fruits and leafy vegetables into their diet in contrast 9 (2.1%) of them opposed this change. Almost all the respondents 387 (91.3%) were inclined to engage in more frequent physical exercises conversely 37 (8.7%) declined to alter their current practice. 380 respondents accounting for 89.6% expressed an openness to reducing their alcohol consumption to the absolute minimum however 44 (10.4%) of respondents were hesitant to modify their intake patterns. 401 (94.6%) of the respondents were prepared to seek guidance from healthcare professionals regarding hypertension while 23 (5.4%) of them were averse to this change.

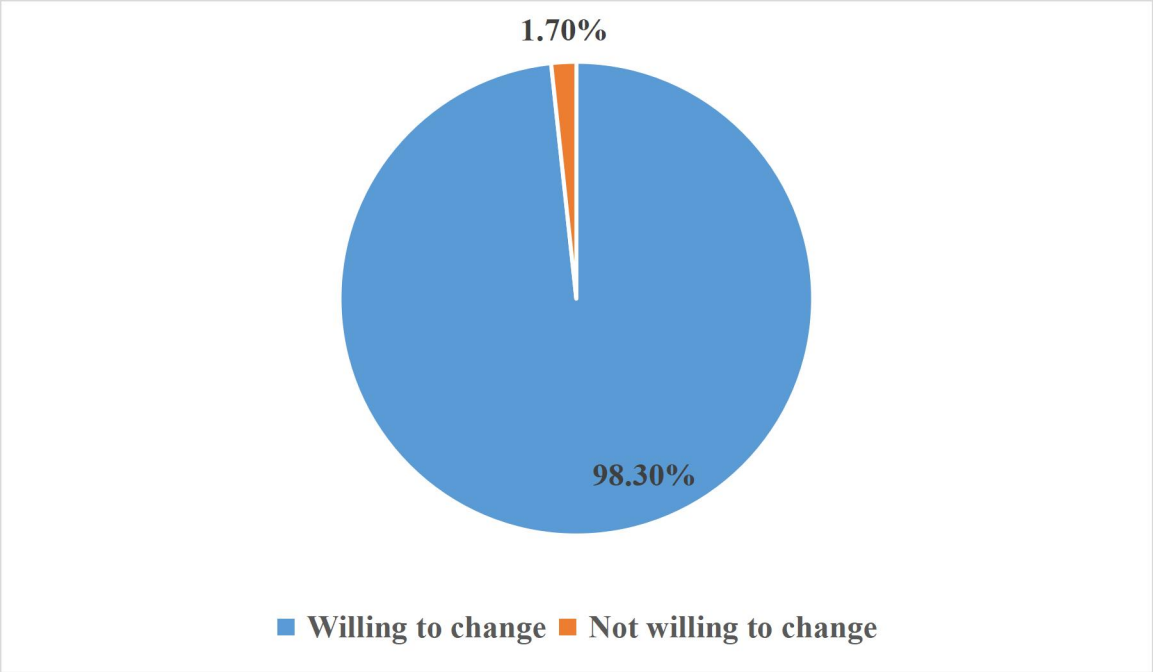

FIGURE 4: OVERALL WILLINGNESS OF RESPONDENTS TO CHANGE BEHAVIOUR

A majority of the respondents 98.3% were inclined to transform or improve on their current habits conversely only 1.7% of the respondents were disinclined to modify their lifestyle.

TABLE 14A: SOCIODEMOGRAPHIC CHARACTERISTICS AND WILLINGNESS OF RESPONDENTS TO CHANGE BEHAVIOUR

VARIABLE	WILLING TO CHANGE		TEST	p-value
	YES	NO		
	FREQUENCY (%)			
Age groups			**Fisher's Exact**	0.305
16-20	203 (97.1)	6 (2.9)	3.584	
21-25	168 (99.4)	1 (0.6)		
26-30	41 (100.0)	0 (0.0)		
31-35	5 (100.0	0 (0.0)		
Sex			**Fisher's Exact**	1.000
Male	240 (98.4)	4 (1.6)	0.000	
Female	177 (98.3)	3 (1.7)		
Religion			**Fisher's Exact**	1.000
Christianity	378 (98.2)	7 (1.8)	5.675	
Islam	34 (100)	0 (0.0)		
African traditional religion	2 (100.0)	0 (0.0)		
Atheism	2 (100.0)	0 (0.0)		
None	1 (100.0)	0 (0.0)		
Faculty			**Fisher's Exact**	0.431
Agriculture	50 (94.3)	3 (5.7)	5.926	
Arts	53 (100.0)	0 (0.0)		
Basic Medical sciences	53 (100.0)	0 (0.0)		
Engineering	52 (98.1)	1 (1.9)		
Life sciences	52 (98.1)	1 (1.9)		
Management sciences	52 (98.1)	1 (1.9)		
Medicine	53 (100.0)	0 (0.0)		
Social sciences	52 (98.1)	1 (1.9)		
Marital status			**Fisher's Exact**	1.000
Single	405 (98.3)	7 (1.7)	3.816	
Married	8 (100.0)	0 (0.0)		
Cohabiting	2 (100.0)	0 (0.0)		
Divorced	2 (100.0)	0 (0.0)		

Table 14A shows the correlation between respondents' socio-demographic traits and their willingness to change behavior. 203 (97.1%) of the respondents aged between 16 – 20 years were willing to change their behavior. A large portion of the respondents 168 (99.4%) aged between 21 – 25 years were inclined to adopt healthier lifestyle habits. All the respondents 41 (100.0%) aged between 26 – 30 years and 31 – 35 years 5 (100.0%) were open to adopting healthier lifestyle choices. The p-value of the association between their age and their willingness to change did not achieve statistical significance. Almost all the respondents who were males 240 (98.4%) and females 177 (98.3%) were amenable to changing their behavior. The impact of their sex on lifestyle choices was statistically insignificant. 378 (98.2%) of the respondents who were Christians noted willingness to change their behavior however, all the respondents 34 (100.0%) who were Muslims, 2 (100.0%) who practiced African traditional religion, 2 (100.0%) who were atheist and 1 (100.0%) who practiced no religion at all. The influence of their religion and willingness to adopt healthier lifestyle choices did not achieve statistical significance. A significant number of respondents from the Faculty of Agriculture 50 (94.3%), Faculty of Engineering, Life Sciences, Management Sciences, and Social Sciences 52 (98.1%) were disposed to modify their current lifestyle practices. All representatives of the sample 53 (100.0%) who were from the Faculty of Arts, Basic Medical Sciences and Medicine were receptive to altering their current lifestyle conduct. The association between participants' faculties and their willingness to change behavior was not statistically significant. A large number of respondents 405 (98.3%) who were single were willing to take on new behavioral patterns.

TABLE 14B: SOCIODEMOGRAPHIC CHARACTERISTICS AND WILLINGNESS OF

VARIABLE	WILLING TO CHANGE		TEST	p-value
	WILLING	NOT WILLING		
	FREQUENCY (%)			
Year of study			**Fisher's Exact**	0.238
100	71 (100.0)	0 (0.0)	5.508	
200	70 (97.2)	2 (2.8)		
300	129 (96.3)	5 (3.7)		
400	81 (100.0)	0 (0.0)		
500	17 (100.0)	0 (0.0)		
600	49 (100.0)	0 (0.0)		
Primary caregiver			**Fisher's Exact**	0.472
Both parents	306 (98.4)	5 (1.6)	7.223	
Father only	17 (94.4)	1 (5.6)		
Mother only	52 (98.1)	1 (1.9)		
Guardian/Relatives	19 (100.0)	0 (0.0)		
Self-supporting	21 (100.0)	0 (0.0)		
Husband	1 (100.0)	0 (0.0)		
Friends/Family	1 (100.0)	0 (0.0)		
Monthly allowance/Income			**Fisher's Exact**	0.830
Below 20,000	133 (98.5)	2 (1.5)	1.976	
21,000 – 40,000	117 (97.5)	3 (2.5)		
41,000 – 60,000	84 (98.8)	1 (1.2)		
61,000 – 80,000	33 (97.1)	1 (2.9)		
Above 100,000	38 (100.0)	0 (0.0)		

RESPONDENTS TO CHANGE BEHAVIOUR

Table 14B shows the association between respondents' willingness to change behavior and their socio demographic profile. Majority of respondents in their second 70 (97.2) and third 129 (96.3) of study were willing to adopt healthier lifestyle choices. All the respondents in their first 71 (100.0%), fourth 81 (100.0%), fifth 17 (100.0%) and sixth 49 (100.0%) were willing to change behavior. Majority of the respondents who had both parents 306 (98.4%), Fathers only 17 (94.4%), mothers 52 (98.1%) were inclined to change while all the respondents who had guardians/relatives 19 (100.0%), self-supporting 21 (100.0%), husband 1 (100.0%) and friends/family 1 (100.0%) were also willing to change their behavior. Respondents who had their monthly allowance below 20, 000 naira 133 (98.5%), between 21,000 – 40,000 naira 177 (97.5%), 41,000 – 60,000 naira 84 (98.8%), 61,000 – 80,000 naira 33 (97.1%) were willing to adopt healthier lifestyle while all the respondents 38 (100.0%) were amenable to changing their lifestyle.

TABLE 15: PRACTICE OF RESPONDENTS TOWARDS HYPERTENSION AND WILLINGNESS TO CHANGE BEHAVIOUR

PRACTICE	WILLING TO CHANGE		TEST	p-value
	YES	NO		
	FREQUENCY (%)			
			Chi-square	0.609
Good	402 (98.3)	7 (1.7)	0.261	
Poor	15 (100.0)	0 (0.0)		

Table 15 shows the relationship between the practices of respondents towards hypertension prevention and their willingness to change behavior. All the respondents 15 (100.0%) who had poor practices were willing to adopt healthier lifestyle practices. 402 of the respondents making up 98.3% of them who had good practices were willing to improve on their lifestyle choices to prevent hypertension. 7 (1.7%) who already had good practices towards hypertension prevention were satisfied with their current habits and lifestyle and were resistant to making any improvements.

CHAPTER FIVE

In this chapter, the findings obtained from the study are interpreted and discussed in relation to the objectives. The results are compared to existing literatures to highlight their significance in understanding the knowledge, attitude and practice of University of Benin students towards hypertension prevention, explore their implications and offer recommendations for public health interventions.

DISCUSSION

Majority of the respondents were aged between 16 and 20 years with the mean age being 21.42 ± 3.09. This finding is consistent with the typical age range of undergraduate students in Nigeria. The age of this demographic is representative of students who have recently transitioned from secondary school education. This is in tandem with a study carried out among students in a tertiary institution in Lagos, Nigeria where most of the respondents were aged between 16 – 20 years.[42] The respondents' age group is at the formative stage for developing lifelong behaviors. Early interventions targeting knowledge and practices related to hypertension prevention can help instill healthier lifestyle choices, reducing the risk of hypertension later in life. Tailored health education programs for young adults could play a crucial role in fostering long term preventive behavior.

More than half of the respondents were male, which may be attributed to the higher male enrollment in the selected faculties for this study compared to female enrollment. This finding contrasts with a study conducted at a tertiary institution in Lagos, Nigeria, where the majority of respondents were female.[42] Education plays a crucial role in empowering men to make informed

health decisions, fostering healthier lifestyles, and potentially reducing the incidence of preventable diseases and improving overall health outcomes.

A preponderance of the respondents were Christians likely reflecting the fact that the University of Benin is situated in southern Nigeria, where Christianity is a predominant religion. This observation is similar to a study conducted in Benin City, Nigeria, where nearly all respondents were also Christians.[69] The predominance of Christian respondents indicates that community-based health programs might effectively utilize churches as platforms for spreading health information and encouraging preventive practices.

A significant portion of the respondents were aware of hypertension, this is dissimilar to a study carried out in Benue state University, Benue, Nigeria where only a minority of the respondents were aware of hypertension.[24] The increased awareness among the respondents could be attributed to students having easy access to health information through various channels such as online resources and campus based health services. Additionally, peer interactions and social networks within the university community may also help in the dissemination of information relating to hypertension. As the future adult population, these students are at a pivotal stage where they can adopt and sustain healthy lifestyle choices that reduce their risk of developing hypertension. This awareness also contributes to long-term reduction in the prevalence of hypertension-related diseases thereby improving the overall health of the country and reducing health care costs.

A predominant number of respondents had good knowledge about hypertension and its preventive strategies, this parallels a study carried out in Kirtipur, Nepal where a majority of the respondents were knowledgeable about hypertension.[30] The good knowledge among the respondents may be because of comprehensive educational efforts provided by the university in

health related topics. Also, the school based health services may have also constantly disseminated information to students when they visit the school health center. Increasing knowledge of hypertension among students is crucial for early detection and intervention. Moreover, educated students can disseminate this knowledge within their social networks thereby amplifying the impact of health promotion efforts and fostering a culture of preventive health.

A significant correlation was observed between respondents' knowledge of hypertension and its preventive strategies and their academic faculty and year of study. This is in tandem with a study conducted in the University of Gondar, Ethiopia where a similar correlation were noted.[70] The notable link between knowledge and academic faculty may stem from differences in curricula and exposure to health related topics. This highlights the importance of expanding health education across all academic disciplines. Although students in health-related fields often gain this knowledge through their specific coursework, there is an opportunity to offer targeted health education to students in non-health disciplines by integrating basic health content into their general courses, helping to address any knowledge gaps. Furthermore, the significant correlation between their year of study and their knowledge of hypertension may be attributed to the fact that has students' progress through their academic journey, their knowledge and understanding of various topics relating to health increases. Students in higher years may have had more opportunities to engage with educational content that touches on health issues either through formal coursework or extracurricular activities.

Almost all the respondents had a positive attitude towards hypertension prevention. This finding parallels a study conducted in the University of Karbala, Iraq where a majority of the participants had a positive attitude towards hypertension prevention.[37] Majority of respondents having a

positive attitude may be attributed to how knowledgeable they are about hypertension. Their exposure may have shaped their perceptions and created a greater sense of responsibility towards adopting preventive measures. Moreover, despite being a relatively young and healthy demographic, some students may have encountered hypertension through personal experiences with family, friends, or acquaintances, increasing their awareness of the condition's risks. The fear of developing hypertension in the future, along with the desire to prevent complications, could have driven students to adopt a more positive attitude towards hypertension prevention.

There was a significant association between the marital status of the respondents and their attitude towards hypertension prevention. This is similar to a study carried out in the International Islamic University of Malaysia (IIUM), Malaysia where similar correlation was noted between the participants' attitude and marital status.[71] This relationship might be explained by the possibility that married students feel a greater responsibility for their health and family. They may see maintaining good health, including preventing hypertension, as essential for sustaining a stable family life. Furthermore, marital status can shape lifestyle choices, which in turn impacts health attitudes. Married individuals may have more organized routines, influenced by their spouses' health habits, such as shared meal planning, exercise routines, and healthcare decisions.

Over half of the respondents have previously checked their blood pressure, this is contrary to a study carried out in Northern Border University, Saudi Arabia where less than half of the respondents had previously checked their blood pressure.[40] The preponderance of students monitoring their blood pressure may be attributed to the widespread use of personal health devices, such as portable blood pressure monitors and smartwatches, which allow them to easily track their blood pressure without needing to visit a healthcare provider. Regular blood pressure

monitoring among students aids in the early identification of hypertension or pre-hypertensive conditions, enabling timely interventions and preventing potential complications.

Majority of the respondents had good practice towards hypertension prevention. This finding is comparable to a study conducted in Dar es Salaam University College of Education, Tanzania where a large portion of the participants had good practice.[45] The widespread availability of health information on digital platforms and social media has likely increased health awareness among university students. As digital natives, this generation has easier access to health content, making them more inclined to adopt preventive health practices. By promoting good practices in hypertension prevention during university years, we can expect a reduction in the incidence of hypertension and its complications in the long term. This will contribute to a lower burden of cardiovascular diseases in the population as these students transition into adulthood, thereby improving public health outcomes.

A statistically significant association was identified between students' practices regarding hypertension prevention and their academic faculty. This finding highlights an important dimension of how academic backgrounds may influence health behaviors, particularly in the context of preventive health measures. The type of academic programs can affect students' lifestyles and stress levels, influencing their health practices. For instance, students in high-pressure programs might experience greater stress, which can alter their health behaviors compared to those in less stressful fields. These differences in stress and lifestyle can impact how students manage hypertension prevention. Tailoring interventions to address the specific needs and contexts of various academic groups can enhance the effectiveness of health programs and support better health outcomes across the student population.

A majority of the respondents including all the respondents who had poor practice towards hypertension prevention demonstrated a willingness to change behavior and adopt healthier lifestyle practices for the prevention of hypertension. This finding is consistent with data from a study conducted in Kaduna state, Nigeria where a preponderance of the participants were willing to adopt healthier lifestyle practices.[56] Their willingness to adopt healthier life style practices can be explained be the fact that academic setting can encourage a sense of personal responsibility for health. University life is a period when students start making independent choices, including those related to their well-being. With the pressures of academic demands, such as stress and unhealthy eating habits, students may become aware of the importance of adopting healthier behaviors to maintain both their academic success and overall health. University students form a distinct group that is both highly influential and well-positioned to act as health advocates within their communities. By embracing healthier habits, they can become role models for their peers, families, and future generations. In doing so, they can raise awareness about hypertension and the importance of prevention, generating a ripple effect that reaches beyond the university environment.

CONCLUSION

The majority of students at the University of Benin demonstrated good knowledge of hypertension and its prevention strategies, with a significant association between their year of study and faculty

Nearly all respondents had a positive attitude towards hypertension prevention, and there was a significant correlation between attitude and marital status.

Almost all respondents followed good practices for hypertension prevention, with a significant association observed with their faculty. All students with poor practices were willing to adopt healthier lifestyle changes.

RECOMMENDATIONS

TO THE SCHOOL AUTHORITIES OF THE UNIVERSITY OF BENIN

1. Incorporate health education into the general course work for students in non-medical disciplines to equip them with knowledge and sustain promotion of healthier lifestyle.
2. Organize periodic health screenings and blood pressure checks for students to facilitate early detection and management of hypertension.
3. Improve the availability of nutritious food in campus bukaterias and provide educational materials on healthy eating habits and their impact on hypertension prevention.

TO THE STUDENTS OF THE UNIVERSITY BENIN

1. Utilize campus health services to regularly check their blood pressure and seek medical advice if any concerning changes is noticed.
2. Engage in hobbies and social activities to reduce their stress levels and get adequate sleep regularly.
3. They should use the campus sports complex to participate in physical activities regularly

4. Encourage friends and course mates to adopt healthy lifestyle practices and support each other in maintaining good health.

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APPENDIX I

QUESTIONNAIRE

Good day,

We are 600 Level Medical Students of the University of Benin. This questionnaire is part of a research study aimed at assessing the knowledge, attitude, and practices related to the prevention of hypertension among students of the University of Benin. Your participation is crucial in understanding the current status and identifying areas for public health education interventions.

I assure you that your responses will be treated with utmost confidentiality. Please answer the following questions honestly and to the best of your ability. Thank you.

SECTION A (DEMOGRAPHIC INFORMATION)

1. Age (As at last birthday) _____
2. Sex Male [ ] Female [ ]
3. Faculty Arts [ ] Basic Medical Sciences [ ] Engineering [ ] Medicine [ ] Management Sciences [ ] Life Sciences [ ] Agriculture [ ] Social Sciences [ ]
4. Year of study 100 level [ ] 200 level [ ] 300 level [ ] 400 level [ ] 500 level [ ] 600 level [ ]
5. Marital status Single [ ] Married [ ] Divorced [ ] Widowed [ ] Cohabiting [ ]
6. Religion Christian [ ] Muslim [ ] African Traditional Religion [ ] Others _____
7. Primary Caregiver Both parents [ ] Father only [ ] Mother only [ ] Guardian/Relatives [ ] Self-supporting [ ] Others _____
8. Monthly income/Allowance Below 20,000 [ ] 21,000 – 40,000 [ ] 41,000 – 60,000 [ ] 61,000 – 80,000 [ ] 81,000 – 100,000 [ ] Above 100,000 [ ]
9. Tribe _____

SECTION B (TO ASSESS THE KNOWLEDGE OF HYPERTENSION AND IT'S PREVENTIVE STRATEGIES AMONG STUDENTS)

10. Have you heard about hypertension? YES[ ] NO[ ]
11. Where did you hear about hypertension? (**Multiple responses is allowed)** Health care professionals [ ] Television/Radio [ ] Internet/Social media [ ] Newspaper/magazine [ ] Family and friends [ ] University/School [ ] Others _____
12. Do you know what hypertension is? YES[ ] NO[ ] **(If No, Skip to No 22)**
13. What is meant by hypertension? When an individual's blood pressure is higher than 140/90mmHg [ ] When an individual's blood pressure is higher than 120/80mmHg [ ] When an individual's blood pressure is higher than 90/50mmHg [ ] When an individual's blood pressure is extremely low [ ]

14. What causes hypertension? (**Multiple responses is allowed)** High levels of stress [ ] Consumption of food high in fat and cholesterol [ ] Genetics [ ] High salt diet [ ] Obesity [ ] Smoking [ ] Old age [ ] I don't know [ ]
15. How is hypertension diagnosed? Blood test [ ] Urine test [ ] Chest x-ray [ ] Blood pressure measurement [ ] I don't know[ ]
16. What are the effects of hypertension? (**Multiple responses is allowed)** Heart attack [ ] Diabetes[ ] Stroke [ ] Kidney failure [ ] Memory problems [ ] Hair loss [ ] Psychosis[ ] I don't know [ ]
17. Do people with hypertension require lifelong treatment? Yes [ ] No [ ] I don't know [ ]
18. Is hypertension preventable? YES[ ] NO[ ] I DON'T KNOW [ ]
19. Can lifestyle changes help prevent hypertension YES [ ] NO [ ] I DON'T KNOW [ ]
20. What diet is recommended to help prevent hypertension? High fat diet [ ] DASH (Dietary approach to stop hypertension) [ ] Low protein diet [ ] High sugar diet [ ] I don't know [ ]
21. What lifestyle changes can help prevent hypertension? (**Multiple responses is allowed)** Increasing salt intake [ ] Regular physical activity [ ] High alcohol consumption [ ] Smoking cessation [ ] Managing stress [ ] Maintaining a healthy weight [ ] Restraining from physical exercises [ ] I don't know [ ]

SECTION C (TO ASSESS THE ATTITUDE OF STUDENTS TOWARDS HYPERTENSION PREVENTION)

22. High blood pressure is preventable? Strongly agree [ ] Agree [ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]

23. Stopping of smoking and alcohol helps to prevent hypertension? Strongly agree [ ] Agree[ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]
24. It is good to avoid extra added salts in your diet? Strongly agree [ ] Agree[ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]
25. It is good to avoid extra cooking oil on your diet? Strongly agree [ ] Agree[ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]
26. It is good to have whole fruits rather than have deserts and sweet? Strongly agree [ ] Agree[ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]
27. Blood pressure should be checked from time to time? Strongly agree [ ] Agree[ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]
28. It is good to engage in regular physical exercise? Strongly agree [ ] Agree[ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]
29. It is good to include green leafy vegetables in your daily diet? Strongly agree [ ] Agree[ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]
30. Lack of proper sleep and rest can increase blood pressure? Strongly agree [ ] Agree[ ] Uncertain [ ] Disagree [ ] Strongly disagree [ ]

SECTION D (TO ASSESS THE HEALTH PRACTICES OF STUDENTS TOWARDS HYPERTENSION PREVENTION)

31. Have you ever checked your blood pressure YES [ ] NO [ ] (**If no, skip to No 33)**
32. If yes, when? This month [ ] In the last Six months [ ] Before the last six months [ ]
33. What kind of diet do you mostly eat? Vegetarian [ ] Non-vegetarian [ ] Eggetarian [ ] Both vegetarian and non- vegetarian [ ]

34. How often do you eat food without vegetables? Daily [ ] 2-3 days in a week [ ] Weekly [ ] Monthly [ ] Rarely [ ] Never [ ]
35. How often do you eat junk food? Daily [ ] 2-3 days in a week [ ] Weekly [ ] Monthly [ ] Rarely [ ] Never [ ]
36. Do you engage in physical exercise? YES [ ] NO[ ] (**If no, skip to No 38)**
37. How often do you engage in physical exercise? Daily [ ] 2-3 days in a week [ ] Weekly [ ] Monthly [ ] Rarely [ ]
38. Do you smoke? YES[ ] NO [ ] (**If no, skip to No 41)**
39. How often do you smoke Daily [ ] 2-3 days in a week [ ] Weekly [ ] Monthly [ ] Rarely [ ]
40. How many sticks do you smoke on an average day 1-5 [ ] 6-10[ ] 11-15[ ] 16-20 [ ] More than 20 [ ]
41. Do you consume alcohol? YES[ ] NO [ ] (**If no, skip to No 44)**
42. How often do you take alcohol Daily [ ] 2-3 days in a week [ ] Weekly [ ] Monthly [ ] Occasionally [ ] Rarely [ ]
43. How many units of alcohol do you consume per week? (**Where one bottle of beer/ one glass of alcoholic wine/ one shot of vodka is equal to one unit)** 1-5 [ ] 6-10[ ] 11-15[ ] 16-20 [ ] More than 20 [ ]

SECTION E (TO ASSESS THE WILLINGNESS OF RESPONDENTS TO CHANGE BEHAVIOUR)

44. Would you be willing to reduce your daily salt intake? YES[ ] NO[ ]
45. Are you willing to incorporate more fruits and leafy vegetables into your diet? YES[ ] NO[ ]
46. Will you start engaging in more regular physical activity? YES[ ] NO[ ]

47. Are you open to reducing your alcohol consumption to the barest minimum? YES[ ] NO[ ]
48. Are you open to monitoring your blood pressure more frequently? YES[ ] NO[ ]
49. Would you be willing to seek guidance from health care professionals or nutritionists to help prevent hypertension? YES[ ] NO[ ]

APPENDIX II

ETHICAL CLEARANCE

CERTIFICATE

HEALTH RESEARCH ETHICS COMMITTEE (HREC)

UNIVERSITY OF BENIN TEACHING HOSPITAL

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Registration Number:
NHREC-UBTH-HREC/24/12/2022B

PROTOCOL NUMBER: ADM/E 22/A/VOL. VII/148654821

PROPOSAL TITLE: **"KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS PREVENTION OF HYPERTENSION AMONG STUDENTS OF THE UNIVERSITY OF BENIN: IMPLICATIONS FOR PUBLIC HEALTH EDUCATION"**

PRINCIPAL INVESTIGATOR(S): **MADEZIA EMMANUEL IKEMEFUNA, NNODUMENE SAMUEL EKELEDIRICHUKWU**

DEPARTMENT/INSTITUTION: **DEPARTMENT OF PUBLIC HEALTH AND COMMUNITY MEDICINE, SCHOOL OF MEDICINE, UNIVERSITY OF BENIN, BENIN CITY, EDO STATE, NIGERIA.**

DATE CONSIDERED: JULY 5TH, 2024

DECISION OF THE COMMITTEE: APPROVED

THIS APPROVAL DATES 5/7/2024 TO 4/7/2025. IF THERE IS DELAY IN STARTING THE RESEARCH, PLEASE INFORM THE HREC SO THAT THE DATES OF APPROVAL CAN BE ADJUSTED ACCORDINGLY

REMARK:

CHAIRMAN: PROF. (MRS) A.N. OFILI **SIGNATURE & DATE...** 5/7/2024

UNIVERSITY OF BENIN TEACHING HOSPITAL RESEARCH COMMITTEE Sign..... Date..... BENIN CITY P.M.B. 1111

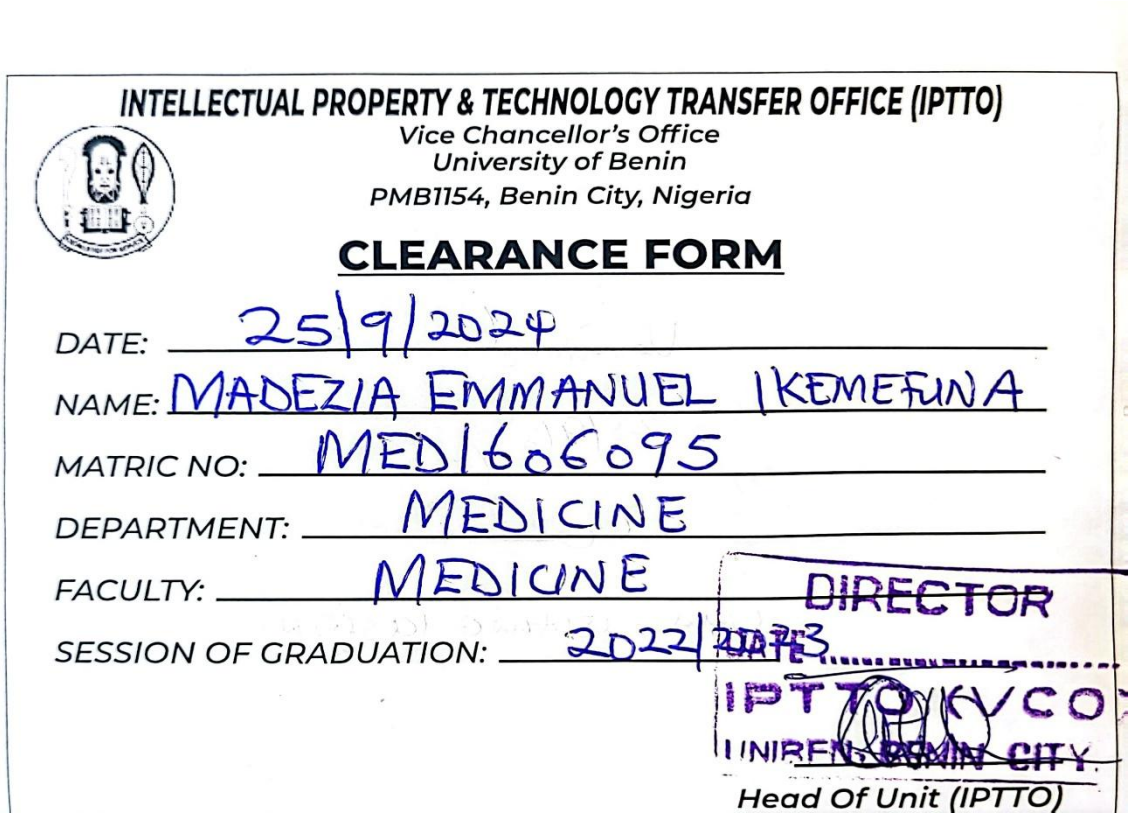
SUPERVISOR (S): DR (MRS) O.E. OBARISIAGBON

DECLARATION BY INVESTIGATOR(S):
PROTOCOL NUMBER (please quote in all enquiries)
Note that no participant accrual or activity related to this research may be conducted outside of these dates. All informed consent forms used in this study must carry the HREC assigned number and duration of HREC approval of the study. In multiyear research, endeavor to submit your annual re-port to the HREC early in order to obtain renewal of your approval and avoid disruption of your research. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the Code. The HREC reserves the right to conduct compliance visit your research site without previous notification

Signature & Date..... 10/9/2024

APPENDIX III

PLAGIARISM TEST CLEARANCE FORM



INTELLECTUAL PROPERTY & TECHNOLOGY TRANSFER OFFICE (IPTTO)

Vice Chancellor's Office
University of Benin
PMB1154, Benin City, Nigeria

CLEARANCE FORM

DATE: 25/9/2024

NAME: MADEZIA EMMANUEL IKEMEFUNA

MATRIC NO: MED/606095

DEPARTMENT: MEDICINE

FACULTY: MEDICINE

SESSION OF GRADUATION: 2022/2023

DIRECTOR
DATE.....
IPTTO/KVCO
UNIBEN, BENIN CITY.
Head Of Unit (IPTTO)

APPENDIX IV

INFORMED CONSENT FORM

TITLE OF STUDY: Knowledge, Attitude And Practice Towards Prevention Of Hypertension Among Students Of The University Of Benin: Implications For Public Health Education

INSTITUTION: Department of Public Health and Community Medicine, College of Medical Sciences, University of Benin, Benin City.

PRINCIPAL INVESTIGATORS: Madezia Emmanuel Ikemefuna and Nnodumene Samuel Ekeledirichukwu

PARTICIPATION: Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue your participation at any time without penalty or loss of benefits. The principal investigator may decide to withdraw you from the study if we are unable to obtain the necessary information.

INTRODUCTION: I am interested in examining knowledge, attitude and practice of the students of the University of Benin towards hypertension prevention.

PROCEDURES TO BE FOLLOWED

QUESTIONNAIRE: If you agree to participate, I will ask you questions about your socio-demographic data, knowledge on hypertension and its prevention, attitude towards hypertension prevention, lifestyle practices towards hypertension prevention and willingness to change behaviour.

BENEFITS: You will be enlightened on hypertension and its preventive strategies.

COMPENSATION: There is no compensation to volunteers for their participation.

DURATION OF PARTICIPATION: This study only requires the questionnaire. There is no follow-up or further information needed.

WHO CAN PARTICIPATE IN THIS STUDY: The study focuses on students of the University of Benin. The participants will be selected from different levels within different departments to ensure adequate representation.

ASSURANCE OF CONFIDENTIALITY OF VOLUNTEER'S IDENTITY: Records relating to your participation in the study will remain confidential. Your name will not be used in any report resulting this study. All questionnaires, computerized records, and analysis of data will contain only a unique study number, not your name.

PERSONS AND PLACES FOR ANSWERS REGARDING YOUR RIGHTS AS A RESEARCH SUBJECT: If during the course of this study you have questions concerning the nature of the research or you believe you have sustained a research-related injury or assault, you should contact;

Madezia Emmanuel Ikemefuna OR Nnodumene Samuel Ekeledirichukwu

Department of Public Health and Community Medicine, College of Medical Sciences, University of Benin, Benin city.

Nigeria.

Phone number: 08100732525 or 08108444324

Email: madeziaemma2017@gmail.com

Ethics and Research Committee,

Phone number: 07063331337

Email: ubthresearchethics@gmail.com

IF THERE IS ANY PORTION OF THIS CONSENT AGREEMENT THAT YOU DO NOT UNDERSTAND, ASK THE FIELD WORKER OR INVESTIGATOR BEFORE SIGNING.

Please, sign below if you have agreed to participate in the study.