ENSIGN GLOBAL COLLEGE, KPONG EASTERN REGION, GHANA

FACULTY OF PUBLIC HEALTH

DEPARTMENT OF COMMUNITY HEALTH

KNOWLEDGE AND ATTITUDE TOWARDS HYPERTENSION AMONG WORKERS AT GOLDEN EXOTICS LIMITED IN THE SHAI OSUDOKU DISTRICT IN THE GREATER ACCRA REGION OF GHANA

BY

FLORENCE AGYEIWAA

(INDEX NUMBER :237100257)

florence.agyeiwaa@st.ensign.edu.gh

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DECLARATION

I, Florence Agyeiwaa declare that this thesis is the product of my own effort as a student at Ensign Global College, Kpong, under the guidance of Dr. Edward Kofi Sutherland. The work has properly acknowledged all pertinent sources, and this thesis has not been submitted in whole or in part for the award of a degree at another school.

Florence Agyeiwaa (237100257)		26/09/2024
(Student's Name & ID)	Signature	Date
Certified by:		
Dr. Edward Kofi Sutherland	……	26/09/2024
(Supervisor's Name)	Signature	Date
Certified by:		
Dr. Stephen Manortey	……	26/09/20024
(Head of Academic Program)	Signature	Date

DEDICATION

I dedicate this project to God almighty for his unfailing mercies throughout this journey. To my husband Mr. Kwesi Gyimah Sasu, whose unwavering support and encouragement fueled my passion for this work. Your patience and understanding during the long hours and challenging moments were a constant source of strength.

To my children, Boahemaa Sasu, Nsoromma Boateng Sasu and Nkunim Antwi- Boasiako Sasu, who inspired me every day with their curiosity and enthusiasm. May this work contribute to a better world for you to grow and thrive in. thank you for being my rock, my motivation and my everything. I am forever grateful.

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DEFINITIONS OF TERMS

Hypertension: It is when the pressure in your blood vessels is too high (140/90mmHg or higher).

Systolic: The first number represents the pressure in the blood vessels when the heart contracts or beats.

Diastolic: The second number represents the pressure in the vessels when the heart rests between beats.

LIST OF ABBREVIATIONS

ACEI	Angiotensin Converting Enzyme Inhibitors
ANOVA	Analysis of Variance
HBP	High Blood Pressure
IDH	Initiatief Duurzame Handel
KAP	Knowledge Attitude Practice
MMDAs	Metropolitan, Municipal and District Assemblies
NCD	Non-communicable Disease
NCD-RisC	Non-communicable Disease
OR	Odds Ratio
WHO	World Health Organization

ABSTRACT

Background: Elevated blood pressure levels serve as a risk factor for cardiovascular and kidney diseases. Despite the deadly nature of the disease, most people lack awareness about the causes, effects and ways to prevent it. Additionally, most people engage in lifestyles that put them at risk of getting the disease or making their condition difficult to control in cases where they are already diagnosed.

Methods: This study used primary data within the framework of a quantitative cross-sectional design to provide answers to the research questions. The primary data was collated using a sample of 355 respondents from the total population of 3767 who were selected according to the stratified random sampling technique. The data was analyzed using descriptive statistics, Analysis of Variance (ANOVA) tests, and multiple regression analysis. The analysis was carried out using Stata version 18.

Results: The findings showed that majority of the respondents (69.9%) are not knowledgeable about hypertension. Also, majority of the respondents (82.8%) exhibit negative attitude towards hypertension. The results further indicate that knowledge of hypertension is higher among respondents who were at least 20 years or educated with senior secondary or tertiary level education. Also, respondents who check their blood pressure level daily or have been diagnosed with hypertension were found to be knowledgeable about hypertension. Additionally, the study results suggest that men had negative attitude towards hypertension. Respondents who were between the ages of 20-29 years and 30-39 years were found to have positive attitude towards

hypertension. The results also pointed to a positive attitude toward hypertension among respondents with tertiary level education.

Conclusion: The respondents had inadequate knowledge of hypertension. Also, attitude towards hypertension among the respondents was very poor. The study thus suggest that health agencies should create awareness about hypertension, highlighting the prevention, causes, risk factors and effective management of the disease. Also, public health education programmes should be targeted at workers of Golden exotic especially men and the less educated in society who are more likely to exhibit negative attitude towards the disease.

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CHAPTER ONE

INTRODUCTION

1.1 Background

Non-communicable diseases are chronic conditions that cause long-term health complications most of which require long-term treatment and care. Globally, approximately 41 million people die each year from non-communicable diseases, representing about 74% of all deaths (World Health Organization, WHO, 2024). Hypertension, which is also known as high blood pressure, is a major type of non-communicable disease that is considered a global public health challenge. It is caused by a combination of genetic, environmental, lifestyle, and physiological factors. The disease has been linked to urbanization, an aging population, socio-economic changes that encourage sedentary habits, obesity, increased alcohol consumption, excessive salt intake, and lack of physical activity among others (Huang et al., 2013; WHO, 2013). Globally, hypertension is regarded as a "silent killer" because of its high frequency and asymptomatic nature. Hypertension, just like most non-communicable diseases, can be prevented and controlled. However, without treatment, it comes with numerous complications and risk of diseases that affects other systems of the human body including the central nervous system, renal system, and cardiovascular system (Elliott, Syme and Jepson, 2020; World Health Organization, 2023).

In both developed and developing countries, hypertension is considered a major health problem that contributes significantly to disease burden and millions of deaths. While the disease is prevalent in high-, middle- and low-income countries, more than three-quarters of deaths attributable to cardiovascular diseases are recorded in lower-middle-income countries (Heller and Kishore, 2017; WHO, 2021). Reports show global disparities in the prevalence of hypertension. In a systematic review of population-based studies on hypertension prevalence in 90 countries, (Mills et al. 2017) revealed the prevalence of hypertension decreased

by 2.6% in high-income countries but increased by 7.7% in developing and underdeveloped countries from 2000-2010. Other studies have also reported similar trends of decreasing and increasing hypertension prevalence rates in high-income and low and middle-income countries respectively (NCD Risk Factor Collaboration (NCD-RisC), 2017; Geldsetzer et al., 2019). The World Health Organization estimates that, globally, about 1.28 billion adults between the ages of 30–79 years have hypertension, with two-thirds living in low and middle-income countries (WHO, 2021b). While low-income countries are projected to have the highest hypertension prevalence rate in both sexes by 2040, Africa is expected to experience the highest rate in females. (Boateng and Ampofo, 2023). The prevalence rate of hypertension is expected to increase by over 25% in Africa by 2030 (Adeloye and Basquill, 2014).

The emergence and increasing prevalence of hypertension in underdeveloped and developing countries have been blamed on the epidemiological transition from communicable and chronic non-communicable diseases (Anyanti et al., 2021). In low- and middle-income regions like Africa, the prevalence of hypertension is expected to be high due to low consumption of fruits and vegetables, high consumption of salt, aging population, insufficient physical activities, and high-income growth (Guthold et al., 2018; Darfour-Oduro, Andrade and Grigsby-Toussaint, 2019; Mensah et al., 2021).

Population-based studies on hypertension estimate the hypertension prevalence rate in Ghana to be between 19-48% depending on the study's investigation protocol and the diagnostic criteria employed to detect hypertension (Commodore-Mensah et al., 2014; Gebreselassie and Padyab, 2015; Lamptey et al., 2017; Acheampong et al., 2019). For instance, (Twumasi et al, 2020) estimated a hypertensive prevalence rate of 34.1% by screening a total of 6,907 participants from Ghana. (Tannor et al 2022) screened a total of 3,080 participants and concluded that the prevalence estimate of hypertension among the participants was 27.3%. The

country recorded an increase in outpatient hypertension cases in health facilities (excluding teaching hospitals) from about 60,000 in 1990 to approximately 700,000 in 2010 (Ministry of Health, 2012). The hypertension prevalence rate among males in Ghana is estimated to be higher than among females (Atibila et al., 2021).

The burden of non-communicable diseases like hypertension falls largely on developing countries. Therefore, for countries like Ghana with hypertensive populations, tackling the risk factors for hypertension to prevent deaths must be a health policy priority. Prevention and management strategies for hypertension must include public awareness creation of the disease and its associated risk factors, and the promotion of behaviors that reduce those risk factors.

1.2 Problem Statement

Largely, many people who have hypertension do not show any symptoms, which is why it is popularly known as a "silent killer". Most people suffering from hypertension are undiagnosed, untreated, or inadequately treated (Echouffo-Tcheugui et al., 2015; Mirzaei et al., 2020). Studies have shown low levels of awareness and treatment of hypertension in Ghana (Sanuade, Boatemaa and Kushitor, 2018). Almost half of all adults who have high blood pressure in Ghana are not aware of their condition and only a few are on treatment (Mills et al., 2016; Calys-Tagoe et al., 2020). (Bosu et al 2021) also reported that about two-thirds of Ghanaian adults who have hypertension are unaware of their condition. In addition, findings of interviews and focus group discussions conducted in communities in four regions in Ghana (Greater Accra, Ashanti, Volta, and Northern Regions) revealed community respondents were sometimes not aware of the asymptomatic and chronic nature of hypertension, and the tendency of it becoming a long-term condition (PATH, 2020).

Inadequate awareness about the prevention, control, and treatment of hypertension most often translates into poor attitudes towards the disease. These changes in attitude and lifestyle not only help to reduce hypertension, but also enhance antihypertensive drug efficacy, delay the incidence of hypertension, and reduce cardiovascular disease risk (Areri et al., 2014; Verma, Srivastava and Kumari, 2015; Buda et al., 2017; Xiao et al., 2020). Studies have revealed most people with hypertension in Ghana who are on medications have their blood pressure uncontrolled (Awuah et al., 2014; Sanuade, Boatemaa and Kushitor, 2018; Sarfo et al., 2018; Tannor et al., 2022). This has been attributed to a lack of knowledge about the disease, and poor compliance with treatment and management regimen (Bioma et al., 2015; Modey Amoah et al., 2020; Sarkodie et al., 2020). Other patients also discontinue treatment due to misconceptions about treatment drugs and fear of adverse events associated with the drugs. Inadequate diagnosis, late detection, and suboptimal control of hypertension are noted to be key drivers of cardiovascular mortality and morbidity in Africa (Kayima et al., 2013).

The WHO advocates for awareness creation as an important step to prevent hypertension and reduce its prevalence, and its associated morbidity and mortality. Therefore, to enhance public awareness about hypertension, there is a need to intensify evidence-based public education campaigns on the disease, its prevention, risk factors, and the treatment options available to hypertensives. Knowledge-Attitude-Practice (KAP) studies play an important role in the design of such public health education campaigns. Therefore, this study seeks to employ a KAP questionnaire to assess the level of knowledge and attitude towards hypertension among workers at the Golden Exotic Limited located in the Shai Osudoku district in the Greater Accra region of Ghana.

Golden Exotics Limited is a free zone company located in the district that is taking advantage of the district's strategic location. The company is a leading exporter of bananas and pineapples in Ghana (The Sustainable Trade Initiative (IDH)., 2023). The company currently have a staff

strength of 3,767. The number of workers reporting to the company's clinic with hypertension continues to increase over the years. Currently, 465 workers are known hypertensives on medication. However, some workers continue to default in treatment resulting in complications such stroke, blindness and permanent disability despite various health education conducted over the years. This study therefore seeks to assess the level of knowledge and attitude towards hypertension among workers at Golden Exotics Limited in the Shai-Osudoku District in the Greater Accra Region of Ghana.

1.3 Rationale for the Study

The findings of this study will provide an understanding of the level of knowledge and attitude towards hypertension among a specific group (different categories of workers in this case) within the larger population. This will help to inform the design of population-specific hypertension public education and control programmes. The findings will also help to appreciate and monitor progress towards the attainment of the global targets on non-communicable diseases by 2025 in Ghana, especially concerning specific segments of the population. Also, this study is important because it will add to the literature providing information on how KAP theories can be employed to evaluate people's knowledge and attitude towards hypertension.

1.4 Conceptual Framework

To design evidence-based public health education interventions, KAP surveys can help to identify knowledge gaps, held beliefs, and patterns in health behaviors. They can also help to investigate factors that influence people's health behavior, the motives behind their attitudes, and why they practice certain behaviors. KAP survey is a useful data collection tool that guides and informs health promotion strategies in specific populations. The objectives of the study make it possible to design a conceptual framework based on the KAP theory. The model is based on the assumption that increase knowledge on a phenomenon leads to changes in

behaviors of the person. An individual's knowledge about hypertension, its risk factors, prevention, and treatment option, influences his or her attitude and consequently behavior.

Attitude refers to either a negative or positive appreciation or feeling towards an objective (Ajzen and Fishbein (2000). The attitude of the respondents was assessed by assessing their attitude toward hypertension.

Again, when applied to this current study, the theory opines that the sociodemographic features (age, gender, educational level, family history and marital status) have direct influence on the knowledge and attitude toward hypertensive. Again, the knowledge of an individual on hypertension has a direct influence on their attitude toward the condition. Figure 1.0 shows a pictorial presentation of the study's conceptual framework based on the KAP theory.

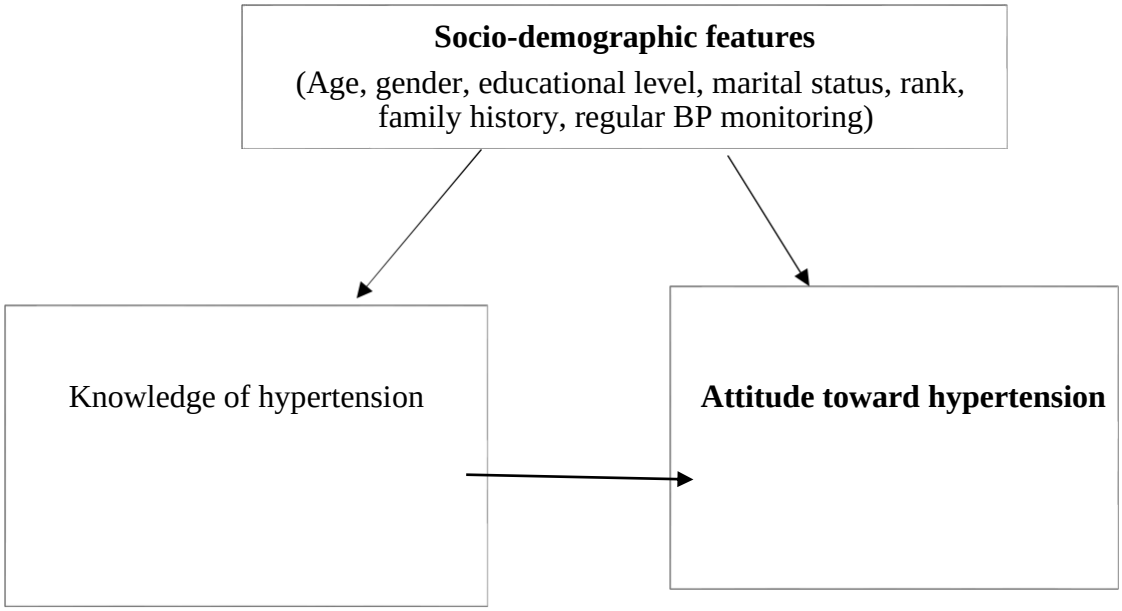

Figure 1.0: Conceptual Framework adopted from Jessiman-Perreault et al (2020).

1.5 Research Questions

The findings of the study will provide answers to the following research questions;

I. What is the level of knowledge of hypertension among workers at Golden Exotics Limited in the Shai Osudoku District?

II. What are the attitudes of workers at Golden Exotics Limited towards hypertension?

III. What are the factors influencing the knowledge and attitude towards hypertension among workers at Golden Exotics Limited in the Shai Osudoku District.

1.6 General Objectives

The study's main objective is to assess the level of knowledge and attitude towards hypertension among workers at Golden Exotics Limited in the Shai-Osudoku District in the Greater Accra Region of Ghana.

1.7 Specific Objectives

The study aims to achieve the following specific objectives;

I. To assess the level of knowledge of hypertension among workers at Golden Exotics Limited.
II. To evaluate the attitudes of workers at Golden Exotic Limited towards hypertension.
III. To assess the factors influencing the knowledge and attitude towards hypertension among workers at Golden Exotics Limited.

1.8 Profile of the Study Area

The Shai Osudoku district is one of the 29 MMDAs in the Greater Accra Region of Ghana. The district is located between latitude 5045-6005o North and longitude 0005o East and 0020o West. The district shares borders with the North Tongu district to the north, Kpone Katamanso municipality to the south-west, Ningo-Pram pram district to the south, Upper Manya district, and Yilo Krobo municipality to the north-west, Akuapim North municipality to the west and Ada West district to the east. The district has a total land area of 968.36 square kilometers. The Volta River stretches 22 kilometers across the north-eastern part of the district. The administrative capital of the district is Dodowa (Shai Osudoku District Assembly, 2023).

The district has about 250 communities with a population size of about 105,610, comprising of 53,136 males and 52,474 females (Ghana Statistical Service, 2021). More than half of the

district's population (60,050) reside in the rural areas of the district. The majority of the working population in the district (58.6%) are employed in the agricultural sector. The proximity of the district to the capital city Accra and the harbor in the Tema metropolis positions the district as a good business location, especially for export business.

Golden Exotics Limited is a free zone company located in the district that is taking advantage of the district's strategic location. The company is a leading exporter of bananas and pineapples in Ghana (The Sustainable Trade Initiative (IDH)., 2023). Some of the countries the company exports to include France, Burkina Faso, Senegal, Italy and Belgium (Ghana Export Promotion Authority, 2017). It has been in operation for almost 20 years. The company has two plantations (for bananas and pineapples) which cover a surface area of over 8,600 hectors (FairTrade Africa, 2023). As of December 2021, the company had a total workforce of about 3,767 (FairTrade Africa, 2023).

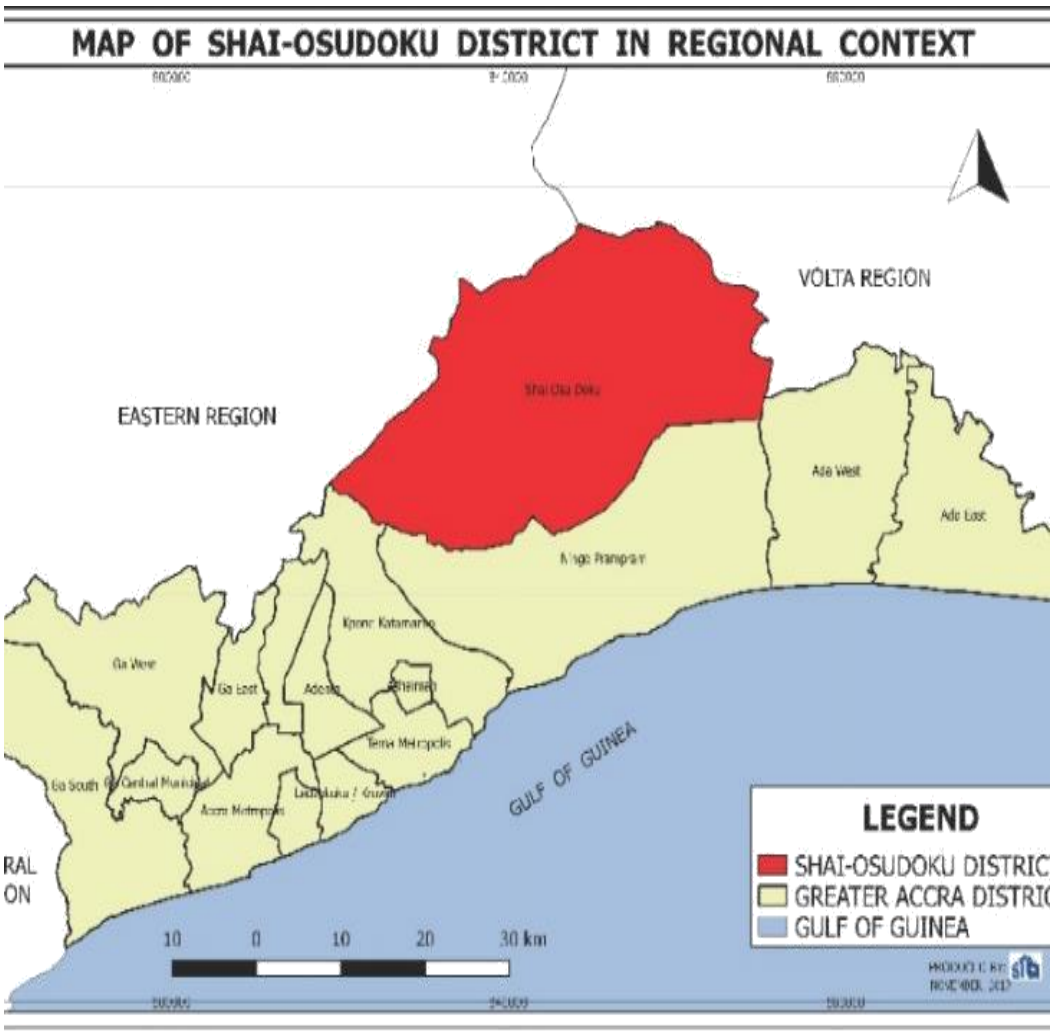

Figure 1.2: Map of Osudoku District in the Greater Accra Region.

Source: https://soda.gov.gh/about

1.9 Scope of Study

The study involved all workers of Golden Exotic limited staff working at the Kasunya farms only. It encompassed the study of their knowledge and attitudes and the factors influencing it.

1.10 Organization of Report

The dissertation ordered in six chapters. The first chapter, looked at the statement of problem, background, conceptual framework, introduction, research questions, general objectives of the study, profile of study area, scope of study, and the study organization. The second is about the literature review made up of overview of hypertension, risk factors, pharmacological and non-pharmacological management of hypertension, knowledge on hypertension, attitude toward hypertension and factors influencing the knowledge and attitude towards hypertension. Chapter three is methodology and includes; study design, study site, data collection techniques, sampling, pre-testing, population, sampling, data handling, assumption, data analysis, ethical considerations, and limitations of the study. Chapter four focus on the result of the study. Chapter five discusses the result. It includes socio-demographic characteristics of the respondents, knowledge on hypertension, attitude toward hypertension and factors that influence knowledge and attitude toward hypertension. Chapter six comprises of the summary, conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Literature review presents the review of related work from books, abstracts, articles, thesis and journals. This review outlined the knowledge on hypertension, attitude toward hypertension and factors associated with the knowledge and attitude of hypertension.

2.1 Definition of hypertension

The Global Report on Hypertension defines uncontrolled hypertension as an office blood pressure reading of greater than 140/90 mmHg. This definition includes both undiagnosed and non-medically treated uncontrolled hypertension (Kario et al., 2024).

Table 2. 1: Classification of Hypertension

Category	**Systolic blood pressure (mmHG)**	**Diastolic BP**
Optimal	Less than 120	Less than 80
Normal	Less than 130	Less than 85
High normal	130-139	85-89
Hypertension stage 1	140-159	90-99
Hypertension stage 2	160-179	100-109
Hypertension stage 3	180 0r higher	110 or higher

(Nugroho et al., 2022).

2.2 Risk factors for hypertension

Aetiology

Essential or primary hypertension is the term used to describe the majority of cases of hypertension (about 95%) in which no specific cause can be identified. Although the exact cause of this kind of hypertension is unknown, researchers think that the kidney, peripheral blood vessels, or sympathetic nervous system are the main sites of disease, with some cases impacting multiple bodily systems. The WHO (2023) have identified various risk factors for hypertension. These include high salt intake, genetic, alcohol intake, obesity, stress, race, and sedentary lifestyle. The Global Burden of Disease (2020) added that excessive salt intake (5 g or more per day) contributed to 2 million cardiovascular disease deaths in 2019.

About 5% of cases of hypertension are secondary hypertension, meaning that the hypertension is caused by another ailment. This type of hypertension is present in persons with an underlying medical condition. Various physiological mechanism account for secondary hypertension. Vasoconstriction and salt retention are the pathogens of this kind of hypertension (Iqbal & Jamal, 2023).

2.3 Causes of secondary hypertension

Renal parenchymal disease; it is the commonest cause of secondary hypertension. This group of renal disorders include diabetic nephropathy, polycystic kidney disease, and glomerulonephritis (Hamrahian & Falkner, 2017).

Again, endocrine disorders are other causes of secondary hypertension. Pheochromocytoma, Cushing's disease, and primary aldosteronism are the frequent endocrine illnesses that cause secondary hypertension; primary aldosteronism accounts for most occurrences of endocrine hypertension (Sica, 2008; de Silva et al., 2020).

Furthermore, vascular disorders like Coarctation of the aorta is the foremost disorder that result in secondary hypertension in young persons (Kim, Andrade, & Cook, 2020. Another vascular

disorder that is implicated in secondary hypertension is vasculitis of medium or large-sized arteries and arteriovenous fistula (Haller et al., 2015). Other causes of secondary hypertension include alcohol intake, pregnancy, drugs (oral contraceptives containing estrogen, steroids, dexamethasone, methylprednisolone, prednisolone), sodium containing antacids, and chronic recombinant human erythropoietin (Masi et al., 2019).

2.4 Signs and symptoms of hypertension

Hypertension usually present with no signs and symptoms most of the times. Again, most individuals are diagnosed with hypertension during routine medical examination or when they present themselves for management of other medical conditions. Signs and symptoms of hypertension include occipital or frontal headache that is usually present in the morning, vertigo, tinnitus, light-headedness and fainting episodes (Oparil et al., 2018). Furthermore, some patients with hypertension may present with complications of hypertension such as hypertensive retinopathy, stroke, heart failure, kidney failure and heart attack (Oparil et al., 2018).

2.5 Management of hypertension

Management of hypertension usually comes in the form of pharmacological and non-pharmacological management.

2.5.1 Non-pharmacological management

This entails maintaining and reducing high blood pressure with the use of suitable dietary and lifestyle modifications. A few of these strategies include helping overweight and obese people lose weight, limiting their diet of salt and saturated fats, getting regular exercise, cutting back on alcohol, giving up smoking, and increasing their intake of fruits and vegetables.

2.5.2 Pharmacological Management

This pertains to the medication used to treat hypertension. Based on how they lower blood pressure, these are divided into the following classes: Calcium channel blockers like amlodipine, Alpha receptor blockers like prazosin, Thiazides and other diuretics like frusemide, B-blockers like atenolol, Combined B and α blockers like labetalol, Angiotensin converting enzyme inhibitors (ACEI) like captopril, Angiotensin II receptor antagonists like losartan, and others like methyldopa and hydralazine

2.6 Level of knowledge of hypertension among Respondents in similar studies

Knowledge level among individuals plays a vital role in their attitude and prevention of hypertension. In Ghana, (Bosu and Bosu 2021) conducted a systematic review on the prevalence, awareness and control of hypertension in Ghana. The review found the prevalence of awareness of hypertension was 35.0%, suggesting that almost two-third of Ghanaians were unaware of being hypertensive. Relatedly, other studies in Ghana have reported awareness prevalence rate of 4.1% (Lamptey et al., 2017) and 46% (Murray et al., 2018).

(Murray et al. 2018) investigated awareness level and education on hypertension and stroke among 302 community members in the Oti region of Ghana. The study used a quantitative cross-sectional designs and participants selected using a convenience sampling method. The result shown that 18.5% demonstrated knowledge on hypertension. Furthermore, participants mentioned identifiable risk for stroke to include; hypertension, hyperlipidemia, poor diet, heart disease, smoking, obesity, family history, diabetes, stress, lack of exercise, and alcohol intake. The researchers also found that less than half of the participants who were known hypertensives were on treatment. On the positive notes, most participants indicated that hypertension was due to lifestyle, suggesting such individuals are likely to practice healthy lifestyle.

In a qualitative cross sectional among Ghanaian soldiers and their spouse in a military barrack, (Dartey et al. 2022) explored the causes and effect of hypertension. The study involved 10 respondents and data collected using a face-to-face interview. According to the study, the effects of hypertension include decreased physical activity, psychological discomfort, financial burden, changes in sexual life, less family engagement, increased spouse workload, friend isolation, and decreased work output.

(Acheampong et al. 2019) examined the predictors of hypertension among women in the Greater Accra Region. The study used a community-based cross-sectional study involving 216 respondents selected using multistage sampling method. The study found hypertensive prevalence rate of 33.8%. Respondents who did not consume fruits, intake of fast and fried food, lack of physical exercise, adding extra salt to food were associated with high blood pressure. In addition, respondents 45-64 years and those above 65 years had high incidence of hypertension.

Relatedly, (Gong et al. 2020) investigated the hypertension-related knowledge among Community using a cross-sectional survey. The study involved 611 respondents and data collected using a standard questionnaire. Result of the study indicates that 75% of the respondents had accurate knowledge on hypertension. Again, 48.4% knew the recommended daily intake of salt. Respondents identified healthy diet, regular physical activities and body control were mentioned by the respondents as control measures.

Similarly, (Chen, Yueyue and Xiaoyu 2022) examined the knowledge, attitude and practices among Chinese patient regarding education on hypertension using a multi-stage competitive sampling. The study involved 143-community pharmacist. The study found out that only 15.7% had a “very good” knowledge, 43.5% had “good”, 30.6% selecting “poor” and 10.2% had “very poor” knowledge regarding hypertension. Further, 80% were aware that hypertensive patients

should be on long-term treatment while over 75% of the respondents knew that family history of hypertension is an unchangeable risk factor. Gain, the researchers found that nearly 70% of the respondents in the study had knowledge on the risk factors relating to hypertension. Furthermore, the study found that 74.1% of the respondents believed that individuals with chronic stress, high intake of salt, and excessive smoking were susceptible to hypertension.

(Machaalani et al. 2022) examined the knowledge of persons living with hypertension in Lebanon. The study a cross-sectional study that involved 342 hypertensive patients. Data was collected using a standard questionnaire. The result of the study indicates that most respondents had fair knowledge regarding hypertension. From the study, 33.9% had poor knowledge while 40.9% had fair knowledge. Again, only 25.1% had adequate knowledge on hypertension. Furthermore, 98% noted that hypertension can be managed by regular intake of drug, 95.9% by low salt intake. Relatedly, 39.8% knew hypertension cannot be treat with traditional medicine or by garlic (33.6%).

2.7 Attitudes toward hypertension in similar studies

In China, Gong et al. (2020) investigated the hypertension -related knowledge and attitude toward hypertension using a cross-sectional survey. The study involved 611 respondents and data collected using a standard questionnaire. The study found out that positive answers regarding attitudes of hypertension prevention was 83.1%. Again, Among, the risk of smoking on hypertension was of the least awareness (79.2%) while people at high risk for hypertension should monitor for their blood pressure had the highest awareness. Furthermore, over 70% of the respondents did not smoke or drink alcohol while 93.6% take adequate consumption of fresh vegetables. About half of the participants, however, did not appropriately regulate their intake of fat and salt, maintain a balanced diet, or manage their body weight.

Again, Chen et al. (2022) examined the knowledge, attitude and practices among Chinese patient regarding education on hypertension using a multi-stage competitive sampling. The

study involved 143-community pharmacist. Findings from the study indicates that majority, had a favorable attitude toward the benefits of patient education for hypertension but slightly less awareness of their significance. Furthermore, 99% of the participants acknowledged that patient education plays a crucial role in enhancing medication compliance, health-related behaviors, blood pressure control, and information acquisition for hypertension patients.

The general positive attitude of the respondents could be due to the fact that they are pharmacist and likely have adequate knowledge on hypertension.

(Kebede, Taddese, and Girma 2022) conducted a prospective cross-sectional study involving 387 respondents. The aim of the study was to examined the knowledge, attitude and practice of lifestyle modification among patients who had being admitted for hypertension and on follow visit. The study's findings show that 67.7% of participants knew about lifestyle change, 92.0% were aware that hypertension can have other health consequences, and 92% were aware that lifestyle modification can lower blood pressure. Approximately 95% and 91.7% of the participants stated that alcohol has an influence on hypertension and that lowering alcohol intake controls, whereas 90.2% of the participants responded that reducing salt intake resolves hypertension.

(Kebede, Taddese, and Girma 2022) conducted a prospective cross-sectional study involving 387 respondents. The aim of the study was to examined the knowledge, attitude and practice of lifestyle modification among patients on follow up for hypertension treatment. In terms of respondents' attitudes toward hypertension, 48.8% strongly agreed that the condition is one that can be avoided. 50.6% of respondents highly agreed and supported limiting added salt consumption during regular meals in order to control HBP. Additionally, 55.3% of participants strongly agreed that quitting smoking and limiting alcohol use help to control hypertension, while 61.2% of people strongly agreed that regular exercise helps to control the condition. In conclusion, the study found that 54.0% of participants had a positive attitude toward changing their lifestyle to reduce their hypertension.

Furthermore, (Machaalani et al. 2022) investigated the attitude toward hypertension among respondents in Lebanon. The study reported that 67.2% had adequate attitude toward hypertension, 30.7% had fair attitude while 2% had poor attitude. Furthermore, the results showed that 38.6% of patients agreed and 51.8% of patients strongly agreed that it was preferable to have a normal body weight in order to avoid hypertension. Furthermore, smoking creates health difficulties, according to 8.2% and 24.3% of patients, respectively, who strongly agreed and concurred.

2.8 Factors influencing the knowledge and attitude towards hypertension

Various factors have been reported to be associated with the knowledge and attitude toward hypertension. In China, (Gong et al. 2020) investigated the hypertension -related knowledge and attitude toward hypertension using a cross-sectional survey. The study involved 611 respondents at risk for hypertension and data collected using a standard questionnaire. The result indicates that age and education were associated with knowledge of hypertension with younger respondents had OR =2.82 over older persons while respondents with higher educational level (OR = 2.24, 95% CI: 1.04–4.84) had better knowledge. Again, the low age group also had better attitudes (OR = 2.87, 95% CI: 1.31–6.26) than older person.

(Kebede, et al. 2022) in their prospective cross-sectional study involving 387 respondents in Ethiopia found that monthly income and duration since diagnosis was associated with patients' knowledge regarding hypertension preventionFurthermore, participants who had been receiving treatment for hypertension disease for one to five years were 6.14 times more likely to be knowledgeable than those who had been receiving treatment for the condition for more than ten years, and participants who had received a diagnosis of hypertension within the last six months were 4.39 times more likely to be knowledgeable than those who received a diagnosis earlier in the decade. The findings from the study shows that the duration of living with hypertension influence the knowledge and attitude of the person.

In Malaysia, (Buang, Rahman, & Haque 2019) investigated the knowledge, attitude and practices of 110 respondents on hypertension. Convenience sampling was used to select the respondents, and an interviewer-guided structured questionnaire was used to gather data. The findings show that, with reference to hypertension, knowledge had a substantial fair positive connection with attitude ($r=+0.393$; $p<0.001$) and practice ($r=+0.378$; $p<0.001$). On the flipside, there was no discernible relationship ($r=+0.120$; $p=0.212$) between attitude and practice regarding hypertension. Furthermore, a significant correlation was observed between the respondents' age and their awareness of hypertension ($p <0.001$) as well as their attitude towards it ($p = 0.005$). Lastly, the study found no connection between respondents' knowledge and attitudes about hypertension and their gender, educational attainment, employment status, or family history of hypertension.

(Machaalani et al. 2022) examined the knowledge of persons living with hypertension in Lebanon. The study a cross-sectional study that involved 342 hypertensive patients. The study discovered that marital status (P-value=0.002) and educational attainment (p-value= <0.001) are the factors influencing knowledge of hypertension. Furthermore, there was a significant positive correlation found between the best attitude toward hypertension and higher educational level (p-value = 0.004), longer period of HTN onset (more than 10 years) (p-value = 0.01), and non-smoker status (p-value = 0.015).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the research methodology which provides information on the following: study design and site, the population of the study, sampling technique and sample size, inclusion and exclusion criteria for sample selection, data collection procedure and instruments, ethical consideration, data handling and statistical analysis.

3.1 Study Design

The study is quantitative in nature and adopts a cross-sectional survey design. The design allows for the collection of data from many respondents at a single point in time. Cross-sectional studies provide the researcher an opportunity to compare differences between groups. The design offers a cheaper and less-time consuming approach to data collection and analysis.

3.2 Study Site

The site for the study is the Golden Exotics Limited located at Kasunya in the Shai Osudoku District of the Greater Accra Region. The study specifically focuses on all the workers of Golden Exotics Limited at Kasunya farms. It is a banana plantation farm. The company cultivates and exports banana primarily to European markets. The plantation covers an area of approximately2,500 hectares. The company engages with local communities through initiatives like scholarship programs, infrastructure and health support. The company has established its own clinic that takes care of the workers free of charge and has a well-established Crech for babies whose mothers are employees of the company. They also have certified canteens which provides free lunch for the workers.

3.3 Study Population

The population of a study refers to the entire group of people about which some information is needed to be investigated. The population is the pool from which the sample is selected. For this study, the population included all the workers of Golden Exotics Limited at Kasunya farms.

3.4 Inclusion and Exclusion Criteria

3.4.1 Inclusion criteria

The study focused on all the workers of Golden Exotics Limited at Kasunya farms.

3.4.2 Exclusion criteria

The study excluded all workers of Golden Exotics Limited who are not stationed at the branch located at Kasunya in the Shai Osudoku District. Again, all workers who are absent at the time of the study were excluded from the study.

3.5 Sampling Technique and Sample Size

Participants for the study were selected according to the 51 The stratified sampling technique involves the division of the entire study population into smaller subgroups (strata). The strata or subgroups are formed based on members' shared attributes or characteristics. The stratified sampling technique is suitable in cases when the study's population characteristics are diverse and the researcher wants to ensure every characteristic of the population is represented in the sample. Each stratum was then sampled using simple random sampling. In the case of this study, the characteristic that was used to divide the workers into groups is their work type or designation (rank). After dividing the population into strata, the simple random sampling was then employed to select respondents from each stratum. The number of respondents to be selected from each stratum depends on the stratum's proportion to the entire population. The population is divided into four strata: managers, supervisors, officers, and farm hands.

The sample size calculation was done using the formula by Snedecor and Cochran (1989) which is specified as:

$$= \frac{Za/2 * p\ (1 - p)}{e2}$$

Where n denotes sample size is the reliability coefficient which is set at 1.96 at 95% confidence interval, p is the proportion which has the traits in question, and e is the margin of error set at 5% or 0.05. The proportion of the population which exhibit the characteristics of hypertension is taken to be 30% in accordance with the hypertension prevalence rate estimated by eight studies conducted in the Greater Accra Region (Atibila et al. 2021). The sample size is thus calculated as;

$$n = \frac{(1.96)^2 * 0.3(1-0.3)}{(0.05)^2}$$

$$n = \frac{3.8416 * 0.21}{0.0025}$$

$$n = 322.69$$

Therefore, with a non-response rate of 10% (32), the total sample size for the study will be 355 respondents. Furthermore, there will be proportional allocation to the various strata within population. These are; managers, supervisors, officers, and farm hands.

Table 3.1: Quota of sample to be selected from various ranks

No.	Ranks	Total Population	Required Sample Sizes
1.	Manager	83	(83/3767) *322=7
2.	Supervisors	125	(125/3767) *322=11
3.	Farm hands	3479	(3479/3767) *322=297
4.	Officers	80	(80/3767) *322=7
	Total	**3767**	**322**

3.6 Data Collection Procedure

Three (3) data enumerators were recruited and trained for data collection. The researcher visited the Kasunya plantation of Golden Exotics Limited after permission is sought from management of the company to collect the data. The day and time of the visit was agreed on with management. The survey questionnaire (in printed form) will be administered to each participant and completed within 20-30 minutes. The completion of the form was done after the consent form is signed depending on the age of the respondent. For participants who are unable to read, the questionnaire will be translated into a language they understand by the enumerators. Also, for those who seek clarification, the enumerators were on standby to provide that assistance. After the data collection exercise, the completed questionnaires will be prepared for data entry and analysis.

3.7 Data Collection Methods and Tools

The data collection instrument is a survey questionnaire which is divided into three parts. The first part (Part A) requests the socio-demographic features or background information of the respondents. The features include gender, age, marital status, religion, level of education, and family history of hypertension. The second part (Part B) requires the respondent to answer nine questions (with some having sub-questions) on hypertension. The questions were obtained from a review of the relevant empirical literature. The third part (Part C) comprise seven questions on attitudes towards hypertension. Each participant will be given a unique identification number.

3.8 Pre-testing of Data Collection Tool

The questionnaire was pre-tested at the Volta River Estate Limited using about 20 respondents. The company owns a banana plantation at Asutsuare in the Shai Osudoku District of the Greater Accra Region. The pre-testing helped to assess respondents' understanding of the questionnaire. Furthermore, it also helps to identify and address potential problems with the

questionnaire to make it more reliable and valid. The study's empirical analysis was excluded results from the pretesting.

3.9 Data Handling

Data handling process is important in ensuring the integrity of research data since its addresses concerns related to confidentiality, security, and preservation of data collected. The questionnaires were cross-checked for completeness before the data entry. Incomplete questionnaires were sorted out and different respondents asked to complete it. Completed questionnaires were numbered before entry to reduce repetition of entry. All completed individual questionnaires were kept under lock and key. Again, multiple backup copies were created and stored multiple devices to ensure easy data recovery in case of emergencies. Also, variables will be generated and coded at this stage.

3.10 Statistical Analysis

The analysis of data was based on the research questions set for the study. Data analysis was done using STATA version 19.0. Data was first entered into Microsoft Excel were cleansing and coding was done. Analytical statistics such as percentages was adopted to assess the level of knowledge and attitude towards hypertension among the respondents. Bivariate analysis such as Analysis of Variance (ANOVA) test whether there are significant differences in the level of knowledge and attitude towards hypertension across respondents' socio-demographic features. Also, the study employed a multiple linear regression analysis to determine the factors influencing knowledge and attitude towards hypertension. A respondent is deemed "knowledgeable" about hypertension if he or she answers at least 10 questions (out of a total of 19 questions) on knowledge of hypertension correctly. A score of less than 10 is categorized as "not knowledgeable". In relation to the questions on attitude towards hypertension, a respondent is considered to exhibit positive attitude if he or she gets more than four questions.

(out of a total of 8 questions) correctly. A total correct score of at most 4 is considered negative attitude towards hypertension.

3.11 Dissemination of Results

Results from the study will be shared with Golden Exotics Limited. There will also be a presentation of the findings at a conference that will be organized by the health services department after discussions with the health services manager. In the end, the findings will be published in a peer reviewed journal.

3.12 Ethical Considerations

Clearance from Ensign Global College Ethical Review Committee was sought before data collection started. Also, administrative permission was sought from the management of Golden Exotics Limited before the data collection started. Again, both oral and written informed consent form was sought from individuals after explaining the purpose of the research before undertaking the exercise and a signed consent form was obtained from participants. Objectives of the research was discussed with them and assured anonymity and confidentiality of all information gathered. Participants were assured of the right to pull out of the research at any time without any consequences to them, their image and self-esteem. Respondents were assured of confidentiality as their person details were not made public to other respondents. Their personal details were not disclosed to other respondents. The respondents are not required to indicate their names on the questionnaire. They are only assigned unique identification numbers.

3.13 Assumptions

It was assumed that the questionnaires for the study was correctly answered and there was no recall bias by the respondents

CHAPTER FOUR

RESULTS

4.0 Introduction

This section presents the findings of the study according to the research objectives. The section is sub-divided into four parts. The first part presents the sociodemographic features of the respondents. The second part outlines the findings relating to respondents' knowledge on hypertension. The third part presents the results on the respondents' attitude towards hypertension. The fourth and last section focuses on the factors influencing the respondents' knowledge and attitude towards hypertension.

4.1 Socio-demographic Features of Respondents

Table 4.1 displays the socio-demographic features of the respondents. A total of 355 respondents participated in the study, with females and males comprising 80.85% and 19.15% respectively. The largest (30-39 years) and smallest (60 years and above) age group constituted about 36.6% and 1.1% of the total sample respectively. About 46.5% of the respondents were married. The smallest group with regards to marital status were widows (2.3%). In terms of level of education, approximately 33.2% of the respondents had junior high-level education, with the least represented group being those with no education. The majority of the respondents were Christians, followed by those who identified with the Islamic and traditional (about 11% and 2%) religions respectively. Majority of the respondents were farmers (approximately 93%).

Table 4. 1 Sociodemographic features of Respondents

Variable	Frequency (n)	Percentage (%)
Gender	68	19.15
Male	287	80.85
Female		
Age		
Below 20	8	2.25
20-29	97	27.32
30-39	130	36.62
40-49	82	23.1
50-59	34	9.58
60 years and above	4	1.13
Marital status		
Single	129	36.34
Married	165	46.48
Cohabiting	39	10.99
Widowed	8	2.25
Divorced	14	3.94
Education		
No education	40	11.27
Primary	55	15.49
Junior high	118	33.24
Senior high	79	22.25
Tertiary	63	17.75
Religion		
Christianity	309	87.04
Islamic	39	10.99
African/traditional	7	1.97
Rank		
Farm hand	330	92.96
Manager	6	1.69
Officer	8	2.25
Supervisor	11	3.1
Family history of hypertension		
Yes	190	53.52
No	81	22.82
I don't know	84	23.66
Ever been diagnosed of hypertension		
Yes	73	20.56

No	280	78.87
I am not sure	2	0.56
How often do you check your blood pressure		
Daily	1	0.28
Weekly	14	3.94
Monthly	63	17.75
Only when I fall sick	276	77.75
Other (specify)	1	0.28

Source: Study data, 2024**.**

A little more than half of the respondents reported they have a family history of hypertension. The respondents who did not know they have a family history of hypertension or were not aware constituted about 23% each.

4.2 Assessment of the Respondents' Knowledge of Hypertension

With the exception of the main source of information on hypertension variable, All the variables with the exception of the source of information on hypertension variable, tested respondents' knowledge on hypertension. More than half of the respondents (64.5%) indicated they know hypertension is a disease, about 22% reported otherwise. Those who did not know that hypertension is a disease comprise 13.5% of the sample. For most of the respondents (47.3%), public hospitals are their main source of information on hypertension. Information from local clinic nurse and community health worker followed with 25.1% and 23.1% respectively.

Table 4. 2 Distribution of Responses to Knowledge Questions on Hypertension

Variable	Frequency(n)	Percentage(%)
Know hypertension is a disease?		
Yes	229	64.51
No	78	21.97
I don't know	48	13.52
Main source of knowledge on hypertension		
Local clinic nurse	89	25.07
Community health worker	82	23.1
Public hospital	168	47.32
Private doctor	8	2.25
Other (specify)	8	2.25
Know how to control hypertension		
Yes	103	29.01
No	194	54.65
I don't know	58	16.34
Normal level of blood pressure		
120/80mmHg	86	24.23
140/95mmHg	24	6.76
150/100mmHg	10	2.82
180/120mmHg	1	0.28
I don’t know	234	65.92
Risk factors for hypertension		
Excessive salt consumption	108	30.42
Smoking	161	45.35
Being overweight	137	38.59
Lack of physical activity	137	38.59
Stress	193	54.37
Family history of hypertension	80	22.54
Excessive alcohol intake	163	45.92
Aging	223	62.82
Signs and symptoms of hypertension		
Restlessness	101	28.45
Palpitations	214	60.28
Headache	200	56.34
Chest pain	151	42.54
Dizziness	214	60.28
No signs	60	16.9

Hypertension is a curable condition		
Yes	125	35.21
No	130	36.62
I don't know	100	28.17
Hypertension causes diseases like stroke if untreated		
Yes	179	50.42
No	88	24.79
I don't know	88	24.79

Source: Study data, 2024.

Furthermore, a little more than half of the respondents (54.7%) reported they know how to control hypertension where as 29% indicated they otherwise. About 16.3% did not know how to control hypertension. Most of the respondents (62.8%) indicated correctly that aging is a risk factor of hypertension. Stress, excessive alcohol intake and smoking followed with about 54.4%, 45.9% and 45.4% respectively. The next correctly reported risk factors of hypertension among the respondents were lack of physical activity (38.6%), overweight (38.6%), and family history of hypertension (22.5%). About 60.3% each reported correctly that palpitation and dizziness are symptoms of hypertension. Headache and chest pain followed with 56.3% and 42.5% respectively. About 17% of the respondents correctly indicated that some hypertensive patients show no signs and symptoms. While 35.2% of the respondents indicated they know hypertension is curable, 36.6% believe otherwise and 28.2% did not know at all. Approximately half of the respondents (50.4%) answered correctly that untreated hypertension can cause diseases like stroke and heart attack and 24.8% indicated otherwise.

According to the study's criteria for scoring the respondents' level of knowledge of contraceptive, about 30.1% scored at least 10, indicating that they are knowledgeable about hypertension. The majority of the respondents (69.9%) scored at most 9, indicating they are not knowledgeable about hypertension.

Table 4. 3 Knowledge of Hypertension among the Respondents

Variable	Frequency (n)	Percentage (%)
Level of knowledge of hypertension		
Knowledgeable	107	30.14
Not Knowledgeable	248	69.86

Source: Author's computation in Stata 15 using study data.

Table 4.4 indicates the ANOVA test to determine whether average knowledge on hypertension score is the same or varies across the various socio-demographic characteristics. The test results show the average knowledge score of hypertension varies across all but two of the socio-demographic features at the 5% significance level. Specifically, the mean knowledge score of hypertension is significantly different across respondents' age groups, marital status, educational level and rank. In addition, the mean knowledge score of hypertension also varies across those with family history of hypertension or diagnosed with hypertension. There is also a significant difference in the average level of knowledge of hypertension across the frequencies of checking blood pressure as reported by the respondents.

Table 4. 4 Variation in Level of Knowledge across Respondents' Socio-demographic Features

Variable	F-statistic	Prob>F
Gender	0.610	0.435
Age	4.000	0.002
Marital status	2.950	0.020
Education	35.000	0.000
Religion	0.000	0.996
Rank	9.740	0.000
Family history of hypertension	7.870	0.001
Diagnosed with hypertension	9.820	0.000
How often do you check your blood pressure	19.570	0.000

Source: Author's computation in Stata 15 using study data.

Table 4.5 shows results of the multiple linear regression analysis of the factors affecting the level of knowledge of hypertension among the respondents. The probability value of the Wald

F statistics indicates the model is significant at the 5% level. The value of the R-squared indicate about 40.6% of the variation in mean level of knowledge score of hypertension is jointly explained by the explanatory variables.

Table 4. 5 Linear Regression Analysis of Factors Influencing Knowledge of Hypertension

Knowledge of Hypertension	Coefficient.	Standard Error	p-value
Female	Reference group	.	.
Male	0.526	0.387	0.175
Below 20 years	Reference group	.	.
20-29 years	2.312	0.718	0.001
30-39 years	3.075	0.765	0.000
40-49 years	2.755	0.894	0.002
50-59 years	2.882	1.097	0.009
60 years and above	3.811	1.107	0.001
Single	Reference group	.	.
Married	0.109	0.533	0.838
Cohabiting	-0.111	0.549	0.840
Widowed	1.090	0.977	0.265
Divorced	-0.333	1.043	0.749
No education	Reference group	.	.
Primary level	0.611	0.629	0.332
JSS level	0.859	0.548	0.118
SSS level	2.669	0.694	0.000
Tertiary	5.356	0.787	0.000
Farm hand	Reference group	.	.
Officer	-0.134	1.366	0.922
Supervisor	0.732	1.512	0.629
Manager	-1.178	1.603	0.463
Family history: Yes	Reference group	.	.
No	0.525	0.450	0.244
I don't know	-0.084	0.417	0.841
Diagnosed: Yes	Reference group	.	.
No	-1.212	0.545	0.027
I am not sure	1.653	0.789	0.037
Check BP: Daily	Reference group	.	.
Weekly	-1.793	0.955	0.061
Monthly	-3.421	0.911	0.000
Only when I fall	-5.130	0.807	0.000

sick			
Other	0.680	0.555	0.221
Constant	8.465	1.364	0.000
R-squared	0.4059		
No. of Observations	355		
F-statistic	8.99		
Prob>F	0.0000		

Source: Author's computation in Stata 15 using study data.

The regression analysis indicates that average knowledge score of hypertension is higher among respondents who are at least 20 years compared to those below 20 years at the 5% significance level. Also, respondents with Senior secondary education or tertiary level education are found to have higher average knowledge score of hypertension relative to those with no education at the 5% significance level. Furthermore, the results show knowledge of hypertensive status is a significant factor influencing knowledge of hypertension at the 5% lower knowledge score of hypertension compared to their counterparts who are aware of their status. Also, respondents who are not sure of their status have higher mean knowledge score of hypertension compared to those who know their status. In addition, the findings point to the average knowledge score of hypertension being lower among respondents who check their blood pressure level monthly or only when they fall sick compared to those who check daily.

4.3 Assessment of Respondents' Attitude towards Hypertension

Table 4.6 indicates that about 51.8% of the respondents do not reduce salt intake to control hypertension whereas 32.1% reported they sometimes check their salt intake. Only about 6% of the respondents control their salt intake all the time. Respectively, only about 5% and 9.9% of the respondents consume fruits and vegetables all or most of the time to prevent hypertension. Most of the respondents do not eat fruits and vegetables to prevent hypertension. Those who occasionally eat fruits and vegetables constitute about 38.6% of the sample. Also, approximately 47. 9% of the respondents consider reducing excess weight to

prevent high blood pressure. Those who consider weight loss as measure to prevent high blood pressure either all the time or most of the time represent about 4.2% and 12.7% respectively. Most of the respondents (44.2%) indicated they do not think hypertension drugs must be taken every day. Only about one-fourth (25.6%) of the respondents indicated drugs for the treatment of hypertension must be taken every day.

Table 4. 6: Distribution of Responses to Attitude Questions on Hypertension

Variable	Frequency (n)	Percentage (%)
Reduce salt intake		
All the time	21	5.92
Most of the time	36	10.14
Not at all	184	51.83
Sometimes	114	32.11
Eat fruits and vegetables		
All the time	18	5.07
Most of the time	35	9.86
Not at all	165	46.48
Sometimes	137	38.59
Consider reducing excessive body weight to reduce hypertension		
All the time	15	4.23
Most of the time	45	12.68
Not at all	125	35.21
Sometimes	170	47.89
Do you think drugs must be taken for hypertension		
Yes	91	25.63
No	157	44.23
I don't know	107	30.14
Concerned that hypertension can cause diseases if untreated		
Yes	184	51.83
No	169	47.61
Indifferent	2	0.56
Do you check your blood pressure regularly		
All the time	6	1.69
Most of the time	45	12.68

Not at all	115	32.39
Sometimes	189	53.24
Which measure will you adopt If diagnosed with BP		
Blood pressure tablets	247	69.58
Traditional medicines	188	52.96
Prayer	82	23.10
Other		
Exercise regularly to prevent hypertension		
All the time	10	2.82
Most of the time	26	7.32
Not at all	211	59.44
Sometimes	108	30.42

Source: Study data, 2024.

Furthermore, a little more than half of the respondents (51.8%) are concerned that hypertension can cause diseases like heart attack and stroke if untreated whereas about 47.6% indicated otherwise. Similarly, approximately 53.2% of the respondents reported they sometimes check their blood pressure, 32.4% do not check at all. Only about 1.7% and 12.9% check their blood pressure all the time or most of the time respectively. More than half of the respondents indicated they will adopt the following if diagnosed with hypertension: blood pressure tablets (69.6%), traditional medicines (53%) and prayer (23.1%). Majority of the respondents (59.4%) do not exercise regularly to prevent hypertension. Only 2.8% and 7.3% prevent hypertension by exercising all the time or most of the time respectively.

Table 4.6 indicate majority of the respondents (82.8%) have a negative toward hypertension. About 17.1% of the respondents exhibit a positive attitude towards hypertension.

Table 4. 7: Respondents' Attitude towards Hypertension

Variable	Frequency(n)	Percentage (%)
Attitude towards hypertension		
Positive	61	17.18
Negative	294	82.82

Source: Author's computation in Stata 15 using study data.

According to the ANOVA test the mean score of attitudes towards hypertension differs across respondents' sociodemographic features. Specifically, at the 5% significance level, the test results show the score of attitudes towards hypertension is significantly different across gender, age, gender, marital status, level of education, rank, status of diagnosis and frequency of checking blood pressure level. Also, the average score of attitudes towards hypertension varies across respondents who reported having a family history of hypertension.

Table 4. 8 Variation in Attitude towards Hypertension across Respondents' Sociodemographic Features

Variable	F-statistic	Prob>F
Gender	15.09	0.000
Age	3.71	0.003
Marital status	4.24	0.002
Education	22.63	0.000
Religion	0.26	0.770
Rank	7.25	0.000
Family history of hypertension	4.52	0.012
Diagnosed with hypertension	23.35	0.000
How often do you check your blood pressure	35.94	0.000

Source: Author's computation in Stata 15 using study data.

4.4 Factors Influencing Respondents' Attitude towards Hypertension

Table 4.9 indicates the results of the regression analysis of the factors influencing the respondents' attitude towards hypertension. The model is statistically significant at the 5% level indicating that the independent variables jointly explain attitude towards hypertension.

Specifically, about 46.05% of variations in attitude towards hypertension is jointly explained by the independent variables.

Table 4. 9 Linear Regression Analysis of Factors Influencing Attitude towards Hypertension

Attitude towards Hypertension	Coefficient	Standard Error	p-value
Female	Reference group	.	.
Male	-0.334	0.173	0.054
Below 20 years	Reference group	.	.
20-29 years	0.530	0.203	0.010
30-39 years	0.502	0.219	0.022
40-49 years	0.437	0.267	0.103
50-59 years	0.517	0.331	0.120
60 years and above	-0.256	0.360	0.478
Single	Reference group	.	.
Married	0.151	0.156	0.332
Cohabiting	-0.002	0.173	0.991
Widowed	0.549	0.453	0.227
Divorced	-0.403	0.362	0.266
No education	Reference group	.	.
Primary level	-0.280	0.235	0.235
JSS level	-0.012	0.224	0.958
SSS level	0.181	0.241	0.452
Tertiary	1.347	0.305	0.000
Farm hand	Reference group	.	.
Officer	-0.104	0.491	0.833
Supervisor	-0.181	0.306	0.556
Manager	-0.621	0.389	0.111
Family history: Yes	Reference group	.	.
No	0.228	0.164	0.166
I don't know	0.067	0.127	0.598
Diagnosed: Yes	Reference group	.	.
No	-0.402	0.233	0.085
I am not sure	-0.097	0.315	0.758
Check BP: Daily		.	.
Weekly	0.440	0.408	0.281
Monthly	0.112	0.351	0.749
Only when I fall sick	-1.129	0.278	0.000
Other	0.934	0.191	0.000
Constant	3.801	0.479	0.000

R-squared	0.4605
No. of Observations	355
F-statistic	11.23
Prof>F	0.0000

Source: Author's computation in Stata 15 using study data.

The findings indicate male respondents have lower score of attitudes towards hypertension as compared to their female counterparts at the 5% significance level. In terms of age, the results suggest that respondents who are within the age group of 20-29 years and 30-39 years have higher average score of attitudes towards hypertension compared to those who are below 20 years. This suggests respondents in the age groups of 20-29 years and 30-39 years have positive attitude towards hypertension. Also, at the 5% significance level, the mean score of attitudes towards hypertension is found to be higher among respondents with tertiary level education compared to those with no level of education. In addition, the results also suggest that the average score of attitudes towards hypertension is higher among respondents who check their blood pressure only when they are sick compared to those who check daily.

CHAPTER FIVE

DISCUSSION OF RESULTS

5.0 Introduction

This section discusses the findings of the study. The results discussion is organized according to the study objectives and research questions.

5.1 Assessment of the Respondents' Knowledge of Hypertension

The results indicate that majority of the respondents have low knowledgeable about hypertension. Specifically, although most (64.5%) of the respondents know hypertension is a disease, 75.78% of the respondents did not know the medically prescribed blood pressure level. In addition, 35.21% of the respondents erroneously indicated that hypertension could be cured while 28.2% did not know whether hypertension can be controlled or cured. Only a few of the respondents identified restlessness as a relevant symptom of hypertension. Similarly, the majority of the respondents did not know some hypertensive patients are asymptomatic. Overall, the study found that 69.9% of the respondents had poor knowledge of hypertension while 30.1% had good knowledge. This result supports the findings of (Bosu et al. 2021), (Mills et al. 2016), and (Calys-Tagoe et al. 2020). The findings of these studies indicate that most adults in Ghana who are hypertensive are unaware of their condition. Furthermore, a study conducted by the Program for Appropriate Technology in Health (PATH) in four regions of Ghana (Greater Accra, Ashanti, Volta, and Northern Regions) between November 2019 and January 2020 revealed most adults are not often aware of the asymptomatic nature of hypertension, its symptoms, chronic nature and the tendency of it becoming a long-term condition. In addition, (Agyei-Baffour 2018) also found knowledge of risk factors of hypertension to be low among a sample of 534 respondents that were selected from six communities in the Asutifi South District in the Brong Ahafo region.

A key factor attributing to the low knowledge about hypertension in Ghana is the misconception surrounding the disease. (Agyei-Baffour 2018) found in the Asutifi South District that most people attribute erroneously the causes of hypertension to agro-chemicals, fertilizers, drinking from old fridges, excess blood and excess vitamins. These misconceptions were found to be prevalent in particularly rural areas of the district. Similarly, findings by (Otemah 2023) pointed to several unscientific beliefs about hypertension in peri-urban communities in Ghana which has the tendency to affect people's control and management of the disease.

Thus, the findings of the afore mentioned study revealed the continuous low level of knowledge of hypertension among a population within a particular jurisdiction as identified in past studies. So further to this current study, follow up qualitative research may need to be conducted to explore any underlying myths or misconceptions forestalling good knowledge gain for workers at golden exotics who are generally rural folks.

5.2 Factors Influencing Respondents' Knowledge of Hypertension

The findings have indicated that the average score of knowledge of hypertension is higher among respondents who are at least 20 years old, educated (with Senior secondary or tertiary level of education), diagnosed with hypertension, or those who check their blood pressure daily. This outcome suggests knowledge of hypertension is higher among such category of people. The finding is consistent with the findings by (Osuala 2017, Almomani et al. 2022), and Eshah and Al-Daken 2016).

Specifically, the study found knowledge of hypertension to be higher among younger and older respondents, in particular, the latter is consistent with findings by (Polonia et al. 2014) and (Anwar et al. 2018). Higher knowledge of hypertension among older population has been

attributed to factors such as the health seeking behaviour of older adults, the high rate of hypertension prevalence, and the increased visit to facility of such groups due to other comorbidities which increases access to information on the disease (Khader et. al., 2019; Polonia et al., 2014). The higher knowledge of hypertension among young adults could be attributed to increasing prevalence of the diseases among the youth (Hamrahian and Falkner, 2022).

The findings also indicate higher education increases knowledge of hypertension. This finding corroborates the results of (Khader et al. 2019), (Anwar et al. 2018) and (Lugo-Mata et al. 2019). (Eshah and Al-Daken 2016) explained that people who have higher education have higher literacy rate and so they are more likely to search, find, read and understand resources on health education. Also, from the results, individuals who check their blood pressure regularly are found to have higher knowledge of hypertension compared to those who check weekly or monthly. Regular checking of blood pressure levels is likely to trigger the information-seeking behaviour which may encourage individuals to search and get more information on a disease, especially if they are hypertensive. The findings from the study can be used by the management of Golden Exotic to improve workers knowledge on hypertension. Staffs can be encouraged to check their blood pressure on a regular basis.

5.3 Assessment of Respondents' Attitude towards Hypertension

The results suggest that the majority of the respondents have a negative attitude towards hypertension. From the study, 82.8% had poor attitude toward hypertension while 17.2% good attitude toward. This finding reflects the respondents' poor attitudes towards taking decisions and adopting lifestyles that prevent hypertension. Specifically, the respondents' demonstrated poor attitude towards the consumption of salt, fruits and vegetables. In addition, they show poor attitude towards following drug prescription for hypertension, reducing excessive body weight, regular exercise and the regular checking of blood pressure level. Nonetheless, 51.8%

of the respondents indicated they worry about hypertension causing diseases like heart attack and stroke if left untreated. These findings are consistent with the outcome of studies by (Asante et al. 2023) and (Anowie and Darkwa 2015). Generally, these studies indicate poor attitude towards hypertension due to low level of awareness about the condition. This finding is plausible considering that most of the respondents had low level knowledge about hypertension. Appreciable or sufficient knowledge about a disease plays a key role in yielding positive attitude towards the prevention, treatment and management of the diseases. According to the KAP theory, when individuals acquire knowledge about a disease, it influences their attitudes which in turn impacts their health practices.

5.4 Factors Influencing Respondents' Attitude towards hypertension

The multiple linear regression analysis suggests that the factors influencing the mean score of attitudes towards hypertension are gender, age, level of education and frequency of checking blood pressure level. This finding agrees with the outcome of the study by (Gong et al. 2020) and (Machaalani et al. 2022). In particular, the study's result indicate that males have lower mean score of attitudes towards hypertension compared to their female counterparts. This result supports the outcome of the study by (Gong et. al. 2020). Women are more likely to take seriously information on their health and effect changes in their lifestyle or behaviours. Studies have shown that women consume more fruits and vegetables than men (Emanuel et al., 2012; Gong et al., 2020). Also, evidence show that men are more likely to drink alcohol or smoke than women which indicates poor attitude towards the prevention of hypertension (Wilsnack et al., 2009; Bosque-Prous et al., 2015; Keyes et al., 2011).

From the results, respondents who are within the age group of 20-29 years and 30-30 years have higher score of attitudes towards hypertension. A plausible explanation for this outcome could be attributed to the increased prevalence rate of hypertension among young adults. Also, the recent increased patronization of gymnasium or fitness centers among both young men and

women could account for positive attitude towards hypertension among such groups. Also, respondents with tertiary level education were found to exhibit positive attitude towards hypertension. This result is consistent with the findings of (Machaalani et al. 2022) and (Paulose, Nkosi and Endriyas 2022). Individuals with higher education are exposed to a lot of information on the prevention, causes, and risk factors of hypertension. In addition, they are able search and find information on the diseases more easily compared to those who are not educated. Consequently, considering that knowledge of a disease influences attitudes and practices, it is plausible to expect individuals with higher education to show positive attitude towards hypertension. Also, considering that the checking of blood pressure level forms part of out-patient activities in most hospitals, it is likely that visitors to the hospitals, upon checking their blood pressure status, would develop positive attitude towards hypertension. This is especially the case if the visit to the hospital as a result of an illness, triggers an awareness of one's status.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATION

6.0 Introduction

This section is sub-divided into three parts. The first part presents a summary of the study. The second part outlines conclusions drawn from the study's findings. The last section presents policy recommendations and strategies based on the findings.

6.1 Summary

This study sought to investigate the level of knowledge and attitude towards hypertension among workers of Golden Exotics Limited located in the Shai Osudoku district of the Greater Accra region. The study design adopted to achieve the research objectives and questions was a quantitative cross-sectional survey design. A survey questionnaire was employed to collect primary data from a sample of 355 respondents. The study employed descriptive statistics (frequencies and percentages), Analysis of Variance (ANOVA) test, and multiple regression analysis to find answers to the research questions. Stata version 15 was used to conduct data analysis.

The data analysis revealed knowledge of hypertension among the respondents is low. This outcome reflects the respondents' answers to various questions about hypertension. While the majority of the respondents (64.51%) correctly identified hypertension is a disease, they did not know how to control it. Most of the respondents (35.21%) believe hypertension is curable. Majority of the respondents (65.92%) did not know the normal blood pressure level. More than half of the respondents correctly identified stress and aging as risk factors of hypertension amounting54.37%and 65.92% respectively. Less than half of the respondents know excessive salt consumption, smoking, being overweight, lack of physical activity, family history of hypertension and excessive alcohol intake are risk factors of hypertension. For the signs and

symptoms of hypertension, majority of the respondents correctly identified palpitation, dizziness and headache. Furthermore, only a few respondents (36.62%) believe hypertension is not curable. About half of the respondents (50.42%) correctly reported that hypertension can cause diseases if left untreated. The findings indicate respondents with the following characteristics; at least 20 years old, educated (either at the Senior secondary or tertiary level), diagnosed with the disease or check their blood pressure regularly.

Furthermore, the results show majority of the respondents have a negative attitude toward hypertension. This result was evident in the respondents' answers to the questions on attitude towards hypertension. Specifically, majority of the respondents reported they sometimes do or do not adopt at all, the following healthy lifestyles; check excessive salt intake; exercise regularly; reduce excess body weight; think drugs must be taken for hypertension; or check blood pressure regularly. In addition, most of the respondents indicated they are concerned about the consequences of not treating hypertension. The majority also reported they will take blood pressure tablets to treat hypertension. The multivariate regression analysis results show the factors influencing the respondents' attitude towards hypertension are gender, age, education and frequency of checking blood pressure. In particular, the results show negative attitude towards hypertension among men and those who only check their blood pressure when they are sick. The findings also pointed to a positive attitude towards hypertension among respondents with tertiary level education.

6.2 Conclusion

From the findings of the study, the following conclusions may be drawn regarding the respondents.

- The knowledge of hypertension among the respondents is low (69.86%).
- The majority of the respondents have negative attitude (82.82%) towards hypertension prevention, control and management.

- The factors influencing knowledge of hypertension among the respondents are age, level of education, hypertension diagnostic status and frequency of checking blood pressure.
- The factors influencing attitude towards hypertension among the respondents are gender, age, education and frequency of checking blood pressure.

6.3 Recommendation

The study proffers the following actions and strategies based on the findings.

- The management of Golden Exotics should organize periodic education on hypertension for all staff. This can improve their knowledge level.
- Periodic health screening including monitoring blood pressure of staff should be instituted by the management of Golden Exotic.
- Regular monitoring of blood pressure of staff by health workers.
- Increase education on lifestyle modification such as alcohol intake, smoking, stress reduction and the need for regular exercise among staff by health workers at the clinic.
- Daily education at the clinic by health workers on the risk factors and prevention of hypertension by health workers.

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APPENDIX A: QUESTIONAIRE

ASSESSMENT OF KNOWLEDGE AND ATTITUDE TOWARDS HYPERTENSION AMONG WORKERS AT GOLDEN EXOTICS LIMITED IN THE SHAI OSUDOKU DISTRICT IN THE GREATER ACCRA REGION OF GHANA

Hello Sir/Madam,

My name is Florence Agyeiwaa and I am a student from Ensign Global College conducting a study titled, "Assessment of knowledge and attitude towards hypertension among workers at Golden Exotics Limited in the Shai Osudoku District in the Greater Accra Region of Ghana".

This questionnaire is designed to gather information on the above research topic in partial fulfilment of the requirements for the award of Master of Public Health Degree from Ensign Global College. Your participation is very important to the success of this research. Your responses are highly appreciated. They will be treated with confidentiality and used for academic purpose only.

I am sharing my research ethics statement for your perusal.

Participant ID: ……..

PART A: SOCIO DEMOGRAPHICS

1. Gender

2. Age (years)

[ ] below 20

[ ] 20-29

[ ] 30-39

[ ] 40-49

[ ] 50-59

[ ] 60 years and above.

3. Marital status

[ ] Single

[ ] Married [ ]

Widowed [ ]

Divorced [ ]

cohabiting

4. Religion

5. Highest level of education

[ ] No education

[ ] Primary

[ ] Junior secondary school

[ ] Senior Secondary school

[ ] Tertiary

6. What is your

rank? [ ] Manager

[ ] Supervisor

[ ] Officer

[ ] Farm hand

7. Do you have a family history of

hypertension? [ ] Yes

[ ]I don’t know

8. If yes to question 7, which family member has hypertension. (Select as many as apply) [ ]Siblings

[ ]Father

[ ]Mother

[ ]Father's parents

[ ] Father's siblings

[ ] mother's siblings

[ ] mother's parents

9. Have you ever been diagnosed of hypertension at a health facility?

[ ] Yes

[ ]No

[ ] I'm not sure

10. If yes to question 9, how many years have you been hypertensive? Specify……..

11. How often do you check your blood pressure? [ ]Daily

[ ] Weekly

[ ] Monthly

[ ]Only when i fall sick

[ ]Other(specify)…….....**PART B: KNOWLEDGE ON HYPERTENSION**

11 Do you know hypertension is a disease? [ ]Yes

[ ]No

[ ]I don't know

12 Which of the following is your main source of knowledge on hypertension? (select one) [ ]Local clinic nurse

[ ]Community health worker

[ ]Public hospital

[ ]Private doctor

[ ]other (specify)……..

13 Do you know how to treat and control hypertension? [ ]Yes

[ ]No

[ ]I don't know

14. What is the normal level of blood pressure [ ]120/80mmHg

[ ]180/120mmHg

[ ]140/95mmHg [

]150/100mmHg [

]I don't know

15. What are the risk factors for hypertension? (select all that apply)

I. Excessive salt consumption II. Smoking

III.Being overweight

IV. Lack of physical activity

V. Stress

VI. Family history of hypertension

VII. Excessive alcohol intake

VIII. Aging

16. What are some of the signs and symptoms of hypertension? (Select all that apply) [ ]Restlessness

[ ]Palpitations

[ ]Headache [

]Chest pain [

]Dizziness [

]No signs

17. Hypertension is a curable condition

[ ] Yes

[ ]No

[ ]I don’t know

18. Hypertension can cause diseases such as heart attack, stroke, if left untreated [ ]Yes

[ ]No

[ ]I don’t know

PART C: ATTITUDE TOWARDS RISK FACTORS (PREDICTORS) OF HYPERTENSION

19. Do you reduce salt intake regularly to prevent hypertension? [ ]All the time

[ ]Most of the time

[ ]Sometimes

[ ]Not at all

20. Do you eat plenty of vegetables and fruits regularly to prevent hypertension? [ ]All the time

[ ]Most of the time

[ ]Sometimes

[ ]Not at all

21. Do you consider reducing excessive body weight to prevent hypertension? [ ]All the time

[ ]Most of the time

[ ]Sometimes

[ ]Not at all

22. Do you think drugs for hypertension must be taken every day?

[ ]Yes

[ ]No

[ ]I don’t know

23. Are you concerned that hypertension can cause diseases such as heart attack, stroke, if left untreated?

[ ]Yes

[ ]No

[ ]I am indifferent

24. Do you check your blood pressure

regularly? [ ]All the time

[ ]Most of the time

[ ]sometimes

[ ]Not at all

25. If you are diagnosed of high blood pressure, which measure will you use to control it? (select all that apply)

[ ]Blood pressure tablets

[ ]Traditional medicines

[ ]Prayer

[ ]Other(specify)…….

26. Do you exercise regularly to prevent hypertension?

[ ]All the time

[ ]Most of the time

[ ]Sometimes

[ ]Not at all