International Journal of Public Health and Pharmacology
Volume 5, Issue 1, 2025 (pp. 37-54)
www.abjournals.org

KNOWLEDGE, PERCEPTION AND PREVENTIVE PRACTICES OF CARDIOVASCULAR DISEASE RISK FACTORS AMONG ADULTS IN ABEOKUTA NORTH AND SOUTH LOCAL GOVERNMENT AREA, OGUN STATE

Adetunji Omolara Olukemi* and M. F. Olanrewaju (Prof.)

Department of Public Health, College of Allied Health Services, Babcock University.

*Corresponding Author's Email: adetuni0109@pg.babcock.edu.ng

Cite this article:

Olanrewaju, M. F., Adetunji, O. O. (2025), Knowledge, Perception and Preventive Practices of Cardiovascular Disease Risk Factors Among Adults in Abeokuta North and South Local Government Area, Ogun State. International Journal of Public Health and Pharmacology 5(1), 37-54. DOI: 10.52589/IJPHP-VFRGOJ7G

Manuscript History

Received: 17 Mar 2025

Accepted: 28 Apr 2025

Published: 13 May 2025

ABSTRACT: *Cardiovascular diseases (CVDs) remain the leading cause of mortality worldwide, with a rising burden in developing countries (WHO, 2021). Urbanization in Nigeria, particularly in Abeokuta, is associated with significant lifestyle transitions that may contribute to an increased prevalence of CVD risk factors. A cross-sectional survey with 400 randomly selected adults. Descriptive statistics and Pearson's correlation coefficient were used to examine relationships between knowledge, perception, and preventive practices related to CVD risk factors. The study population comprised 55.5% females and 44.5% males. Knowledge of CVD risk factors varied among respondents, with 53% demonstrating moderate knowledge, 39% high knowledge, and 8% low knowledge. Despite this, 60.7% of respondents had a negative perception, while only 39.3% had a positive perception. Preventive practices were favorable, with 86.6% having good practices, whereas 13.4% exhibited poor preventive behaviors. The findings suggest a substantial level of knowledge, low perception, and good preventive practices.*

KEYWORDS: Cardiovascular disease, knowledge, perception, preventive practices, Nigeria, hypertensive heart disease, public health.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

INTRODUCTION

Cardiovascular diseases (CVDs) encompass various disorders that impact the heart and the blood vessels. These conditions can include ailments such as Coronary heart disease (CHD), Cardiac Arrest, Stroke, Heart failure, Peripheral Artery diseases, Deep vein Thrombosis, pulmonary hypertension, Rheumatic heart disease, Congenital heart disease, Pulmonary Embolism, Angina, and Arrhythmias. CVDs typically involve the narrowing or blockage of blood vessels, which can lead to reduced blood flow to the heart and brain, ultimately resulting in serious health complications. Factors contributing to the development of CVDs include lifestyle choices, such as diet and exercise, as well as genetic predispositions and other medical conditions. Understanding these disorders is crucial for prevention, early detection, and effective management. They are among the leading causes of death globally. According to the World Health Organization (WHO) (2021), an estimated 17.9 million people die from CVDs each year, representing approximately 31% of all global deaths. Despite advancements in medical treatment and public health initiatives, the burden of CVDs continues to rise, posing significant challenges to healthcare systems and societies worldwide (WHO, 2021).

Like many other Sub-Saharan Africa (SSA) countries, Nigeria is currently experiencing an epidemiological transition leading to an increased burden of NCDs. Shockingly, Non-Communicable Diseases (NCDs) are responsible for almost 30% of all deaths in Nigeria. The risk of premature death due to CVDs, cancers, respiratory diseases, and diabetes among individuals between 30 and 69 years old is a staggering 22% (Oduyemi et al., 2023). Unfortunately, the number of Daily Adjusted Life Years (DALYs) lost to NCDs has risen by approximately 21.3% - from 24,987.4 in 2010 to 30,306.5 in 2019. In contrast, the DALY loss due to infectious diseases has decreased by about 6.5% during the same timeframe (Oduyemi et al., 2023).

Cardiovascular disease (CVD) continues to be a major concern globally, ranking among the foremost causes of illness and death. In Nigeria, the impact of CVD is particularly pronounced, affecting individuals across various demographics and geographic locations, including urban and rural areas. According to Awosoga et al. (2024), the rising prevalence of cardiovascular diseases (CVD) remains a global concern. In Nigeria, the current prevalence of CVD is 76.11%, with its attendant burden. This study aims to assess the level of knowledge, perception, and preventive practices of cardiovascular disease risk factors among adults in Abeokuta North and South Local Government Area of Ogun State.

Research Objectives

1. To determine the level of knowledge of cardiovascular risk factors among adults in Abeokuta North and South Local Government Area of Ogun State.

2. To assess the perceptions of cardiovascular diseases risk factors among adults in Abeokuta North and South Local Government Areas of Ogun State.

3. To identify the preventive practices engaged in to reduce the risk of cardiovascular diseases among adults in Abeokuta North and South Local Government Areas of Ogun State.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

4. To determine the relationship between the level of knowledge of adults in Abeokuta North and South Local Government Area of Ogun state and their perception of cardiovascular diseases risk factors.

5. To examine the relationship between the levels of knowledge of cardiovascular diseases risk factors among adults in Abeokuta North and South Local Government Area of Ogun State and their preventive practices.

6. To assess the relationship between the perception of adults in Abeokuta North and South Local Government Area of Ogun State and their preventive practices.

LITERATURE REVIEW/THEORETICAL UNDERPINNING

The Cardiovascular system is sometimes called the blood vascular or the circulatory system. It consists of the heart, a muscular pumping device, and a closed system of vessels called arteries, veins, and capillaries. As the name implies, blood contained in the cardiovascular system is pumped by the heart around a closed circle or circuit of vessels as it passes through the various circulations of the body (Muhihi et al., 2020). Diseases affecting this system are referred to as cardiovascular diseases.

Knowledge of the various risk factors associated with cardiovascular disease (CVD) is a crucial initial step in developing an effective preventive strategy to reduce the incidence and burden of CVD within any given population. By comprehensively recognizing these risk factors, which may include lifestyle habits, genetic predispositions, and comorbid conditions, healthcare providers and public health officials can better tailor interventions and educational programs. These efforts can help individuals make informed lifestyle changes, improve health outcomes, and ultimately reduce the prevalence of CVD-related complications and mortality rates in the community (Odunaiya et al., 2023).

The Health Belief Model (HBM), formulated by social psychologists Irwin et al. (1950) and subsequently refined by Rosenstock (1966), is a psychological framework designed to explain and predict health-related behaviours. It emphasizes the attitudes and beliefs of individuals in this process. The model was initially developed in response to the ineffectiveness of free tuberculosis (TB) health screening initiatives and has since become one of the most widely utilized conceptual frameworks for understanding health behaviours.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

RESEARCH METHODOLOGY

Research Design

A cross-sectional survey research design was used for the study to assess the knowledge, perception, and preventive practices linked to CVD risk factors among the adults in Abeokuta, Ogun state, Nigeria.

Sampling Technique

Participants for the cross-sectional survey were selected using a multistage sampling technique to ensure a representative sample.

STEP 1: Selection of Local Government Area.

The two local government areas within Abeokuta were selected. Abeokuta South Local Government Area comprises 15 wards, while Abeokuta North Local Government Area comprises 16 wards.

STEP 2: Selection of wards.

A random sampling method was employed to choose 2 wards each from the Local government areas. Within the Abeokuta South local government area, wards 9 (Ago-Egun/Ijesa) and 14 (Ibara) were selected. Within the Abeokuta North Local Government area, ward 8 (Lafenwa) and ward 16 (Ibara Orile/Onisasa) were selected.

STEP 3: Selection of one-stop Pharmacies.

Six retail pharmacies identified as one-stop Pharmacies were chosen as a cluster. Using convenience sampling.

STEP 4: Selection of respondents.

Within each cluster, specifically at the retail pharmacies, participants who met the specified age criteria for the study were invited to take part in the study. This was conducted through convenience sampling, focusing on individuals who were present at the time of data collection and fell within the designated age range.

Sources of Data Collection

Visits were conducted at the study site to obtain permission for the research project. Two research assistants were hired and trained to ensure they had a thorough understanding and the necessary skills to administer the instruments effectively. The administration process took place within one month. Data collection utilizes structured questionnaires that have been pre-tested within a similar population in the Obafemi Owode Local Government Area. The questionnaires were administered through face-to-face interactions.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Method of Data Analysis

Copies of the completed questionnaire were collected and reviewed. Subsequently, the instruments were organized and cleaned. Each instrument was assigned a serial number for easy identification and retrieval. A coding guide was developed to facilitate the entry of responses into the computer. The coded data was then entered into IBM SPSS Version 23. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were utilized to summarize the demographic characteristics.

To explore the relationship between scores on knowledge of cardiovascular disease (CVD) and perceptions of CVD, as well as between knowledge scores of CVD risk factors and perceptions of those risk factors among participants, the Pearson correlation was applied.

RESULTS/FINDINGS

Demographic Data Analysis

The results of the analysis of the demographic data of the respondents are presented in the Table.

Table 4.1 outlines the socio-demographic characteristics of the study, which included 389 participants with an average age of 31.69 years (SD ±11.29). The majority of participants (51.7%) were between 20-29 years, followed by 17.5% aged 30-39 years, 16.7% within the 40-49 age range, while smaller proportions fell into the ≤19 years (5.7%), 50-59 years (6.2%), and ≥60 years (2.3%) categories. Gender distribution showed that females (55.5%) were slightly more represented than males (44.5%). Marital status revealed that most participants were single (58.9%), while 38.3% were married, and a minimal percentage were divorced (1.3%) or widowed (1.5%). Educational attainment varied, with the majority (85.1%) having tertiary education, while 7.7% had completed secondary education, 4.9% had primary education, and only 2.3% had no formal education. Income distribution showed that 27% earned between 20,000-50,000 Naira, 19.5% earned less than 20,000 Naira, 17.2% earned between 51,000-100,000 Naira, 18.8% fell within the 101,000-200,000 Naira range, and 17.5% had an income of 201,000 Naira or more. In terms of area of residence, 42.7% of respondents lived in urban areas, 35.2% resided in semi-urban areas, while 22.1% were from rural areas.

Table 4.1: **Demographics Data Analysis**

Demographic Characteristics	Frequency	Percent (%)
Age		
Mean ± S.D	31.69 ± 11.29	5.7
≤19	22	51.7
20-29	201	17.5
30-39	68	16.7
40-49	65	6.2
50-59	24	2.3
≥60	9	

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Gender		
Male	173	44.5
Female	216	55.5
Marital status		
Single	229	58.9
Married	149	38.3
Divorced	5	1.3
Widowed	6	1.5
Educational level		
No formal education	9	2.3
Primary education	19	4.9
Secondary education	30	7.7
Tertiary education	331	85.1
Income level		
> 20,000	76	19.5
20,000-50,000	105	27
51,000-100,000	67	17.2
101,000-200,000	73	18.8
≥201,000	68	17.5
Area of residence		
Urban	166	42.7
Semi urban	137	35.2
Rural	86	22.1

Objective One: Knowledge of cardiovascular risk factors among adults in Abeokuta

Table 4.2 shows the assessment of knowledge regarding cardiovascular disease (CVD) risk factors among adults in Abeokuta, revealing varying levels of awareness. A majority of respondents (68.6%) correctly identified CVD as a disease affecting the heart and blood vessels, while 46.3% were able to recognize different types of CVD. Understanding of non-risk factors for CVD was demonstrated by 61.2% of participants, and 87.1% correctly acknowledged that CVD can be prevented. When asked about symptoms of CVD, 70.2% provided the correct responses, while 78.4% correctly identified the main risk factors of CVD. Knowledge of modifiable risk factors was nearly balanced, with 50.1% responding correctly. Awareness of the relationship between diabetes and CVD was evident in 54% of participants, while only 39.1% could correctly identify common diagnostic tests for CVD. Recognizing symptoms of a heart attack was high, with 82% of participants responding correctly. Understanding the importance of adhering to medication regimens for CVD was demonstrated by 74.3% of respondents, and 63.8% correctly identified dietary changes that contribute to lowering CVD risk. However, awareness of examples of modifiable risk factors was relatively low, with only 42.4% answering correctly. When asked about measures to reduce the risk of developing CVD, 64.8% provided correct responses, and 81.7% understood the importance of keeping blood pressure under control to decrease the risk of CVD.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Table 4.2: **Knowledge of cardiovascular risk factors among adults in Abeokuta**

Knowledge Questions	Incorrect (%)	Correct (%)
CVD is a disease that affects the heart and blood vessels	122(31.4)	267(68.6)
Types of CVD	209(53.7)	180(46.3)
Not risk factor for CVD	151(38.8)	238(61.2)
CVD can be prevented by	50(12.9)	339(87.1)
Symptoms of CVD except;	116(29.8)	273(70.2)
Main risk factors of CVD	84(21.6)	305(78.4)
Modifiable risk factors for CVD	194(49.9)	195(50.1)
Relationship between Diabetes and CVD	179(46)	210(54)
Test commonly used to diagnose CVD	237(60.9)	152(39.1)
Common symptoms of heart attack	70(18)	319(82)
Importance of adhering to medication regimens for CVD	100(25.7)	289(74.3)
Dietary changes contributing to lowering risk of CVD	141(36.2)	248(63.8)
Examples of modifiable risk factors of CVD	224(57.6)	165(42.4)
Which of the following can reduce risk of developing CVD	137(35.2)	252(64.8)
Keeping blood pressure under control decreases the risk of CVD	71(18.3)	318(81.7)

Level of knowledge of cardiovascular risk factors among adults in Abeokuta

The overall level of knowledge of cardiovascular disease (CVD) risk factors among adults in Abeokuta varied, with the majority of respondents (53%) demonstrating a moderate level of knowledge. A significant proportion (39.8%) exhibited a high level of knowledge, indicating a substantial awareness of CVD risk factors and preventive measures. However, 7.2% of participants had a low level of knowledge, suggesting the need for targeted health education and awareness campaigns to improve understanding of CVD risk factors among the population. (See Table 4.3)

Table 4.3: **Level of knowledge of cardiovascular risk factors among adults in Abeokuta**

Level of Knowledge	Frequency	Percent (%)
Low	28	7.2
Moderate	206	53
High	155	39.8

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Objective Two: The perceptions of cardiovascular diseases risk factors among adults in Abeokuta

Table 4.4 shows the perception of cardiovascular disease (CVD) risk factors among adults in Abeokuta. A significant proportion of respondents do not perceive themselves as being at risk of developing CVD. Over half (53.7%) strongly disagree that they are likely to develop CVD in the future, while 22.9% disagree. Similarly, 49.6% strongly disagree that they are more likely to have CVD than others. Even when considering family history, 41.6% strongly disagree that a family history of CVD increases their risk.

Despite the low perceived susceptibility, respondents recognize the severity of CVD. A majority (76.9%) agree or strongly agree that CVD can lead to serious health problems, while 63.8% agree or strongly agree that CVD can cause disability. However, when comparing CVD to other diseases, opinions vary—while 30.6% were neutral, 26.7% agreed, and 14.1% strongly agreed that having CVD would be more serious than other diseases.

Most respondents recognize the benefits of preventive measures. About 68.9% believe quitting tobacco and alcohol is beneficial for their health. Similarly, 68.4% agree or strongly agree that eating a healthy diet reduces CVD risk, and 66.3% believe reducing salt and fat intake lowers CVD risk. However, a misconception exists regarding physical activity, with 27% believing that regular exercise increases the risk of CVD.

Several barriers to CVD prevention were identified. Lack of time for physical activity is a concern for many, with 31.4% being neutral and 29.6% agreeing or strongly agreeing. Cost is another major issue, as 42.4% believe eating a balanced diet is expensive, and 42.4% cite financial constraints as a barrier to regular checkups. Additionally, 38.7% struggle with remembering to take medication, and 44.5% strongly disagree that quitting smoking is difficult, possibly indicating low smoking prevalence or denial.

Table 4.4: **Perceptions of cardiovascular diseases risk factors among adults in Abeokuta**

Question	**Response**				
	Strongly disagree(%)	**Disagree(%)**	**Neutral(%)**	**Agree(%)**	**Strongly agree(%)**
Perceived susceptibility					
I am likely to develop CVD in the future	209(53.7)	89(22.9)	49(12.6)	28(7.2)	14(3.6)
My family history of CVD increases my risk	162(41.6)	116(29.8)	45(11.6)	52(13.4)	14(3.6)
I am more likely to have CVD than others	193(49.6)	108(27.8)	41(10.5)	31(8)	16(4.1)
My lifestyle increases my risk of CVD	175(45)	99(25.4)	54(13.9)	49(12.6)	12(3.1)

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

My family has diabetes, I will have CVD	173(44.5)	129(33.2)	51(13.1)	20(5.1)	16(4.1)
Perceived severity					
CVD can lead to serious health problems	31(8)	30(7.7)	29(7.5)	159(40.9)	140(36)
CVD can lead to disability.	32(8.2)	34(8.7)	75(19.3)	150(38.6)	98(25.2)
If I got CVD, it would be more serious than other diseases	46(11.8)	65(16.7)	119(30.6)	104(26.7)	55(14.1)
CVD is not as serious as other diseases	102(26.2)	116(29.8)	91(23.4)	47(12.1)	33(8.5)
Death resulting from CVD is common.	45(11.6)	47(12.1)	90(23.1)	107(27.5)	100(25.7)
Perceived benefits					
When I quit tobacco and alcohol consumption, I am doing something to take care of myself	45(11.6)	32(8.2)	44(11.3)	131(33.7)	137(35.2)
Occasionally, screening for CVD may helpme take care of myself	33(8.5)	41(10.5)	45(11.6)	159(40.9)	111(28.5)
Regular physical exercise increases the risk of CVD	135(34.7)	90(23.1)	59(15.2)	65(16.7)	40(10.3)
Eating a healthy diet can reduce my risk of developing CVD	30(7.7)	34(8.7)	54(13.9)	133(34.2)	138(35.5)
If I reduce salt and fat from my diet, I will decrease my chances of exposure to CVD	21(5.4)	39(10)	71(18.3)	125(32.1)	133(34.2)
Perceived barriers					
I don't have time to engage in regular physical activity.	69(17.7)	83(21.3)	122(31.4)	94(24.2)	21(5.4)
Eating a balanced diet is expensive for me	60(15.4)	111(28.5)	76(19.5)	102(26.2)	40(10.3)

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

I don't always remember to take my drugs.	55(14.1)	108(27.8)	114(29.3)	85(21.9)	27(6.9)
I find it difficult to quit smoking	173(44.5)	77(19.8)	66(17)	46(11.8)	27(6.9)
Going for regular checkup is expensive	60(15.4)	65(16.7)	99(25.4)	102(26.2)	63(16.2)

The level of perceptions of cardiovascular disease risk factors among adults in Abeokuta

The level of perceptions of cardiovascular disease risk factors among adults in Abeokuta indicates that 60.7% of the respondents had negative perceptions, while 39.3% had positive perceptions. (See Table 4.5).

Table 4.5: **The level of perceptions of cardiovascular disease risk factors among adults in Abeokuta**

Perceptions	**Frequency**	**Percent (%)**
Negative	236	60.7
Positive	153	39.3

Objective Three: **Preventive practices engaged in to reduce the risk of cardiovascular diseases among adults in Abeokuta**

Table 4.6 shows preventive practices engaged in to reduce the risk of cardiovascular diseases among adults in Abeokuta. Regarding regular physical exercise as a means of lowering CVD risk, 3.3% of respondents strongly disagreed, 5.7% disagreed, 8.5% were neutral, 42.2% agreed, and 40.4% strongly agreed. When asked about limiting alcohol and tobacco consumption to prevent CVD, 4.4% strongly disagreed, 6.9% disagreed, 9.3% were neutral, 35.5% agreed, and 44% strongly agreed.

On taking time to rest as a preventive measure against CVD, 8.7% strongly disagreed, 8.7% disagreed, 14.9% were neutral, 35.5% agreed, and 32.1% strongly agreed. However, when asked whether increased salt and fat intake from the daily diet would reduce the risk of CVD, 27.5% strongly disagreed, 17.2% disagreed, 15.9% were neutral, 20.8% agreed, and 18.5% strongly agreed, indicating some misconceptions regarding dietary factors in CVD prevention.

Regarding regular screening for possible CVD to reduce complications, 5.1% of respondents strongly disagreed, 5.4% disagreed, 11.1% were neutral, 39.8% agreed, and 38.6% strongly agreed, showing that the majority of respondents recognized the importance of regular health checks in preventing cardiovascular disease complications.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Table 4.6: **Preventive practices engaged in to reduce the risk of cardiovascular diseases among adults in Abeokuta**

CVD preventive practices	Strongly disagree (%)	Disagree(%)	Neutral(%)	Agree(%)	Strongly agree(%)
Regular physical exercise helps lower my CVD risk.	13(3.3)	22(5.7)	33(8.5)	164(42.2)	157(40.4)
Limiting alcohol and tobacco consumption helps prevent CVD.	17(4.4)	27(6.9)	36(9.3)	138(35.5)	171(44)
I take time to rest to prevent CVD.	34(8.7)	34(8.7)	58(14.9)	138(35.5)	125(32.1)
Increased salt and fat intake from daily diet will reduce the risk of CVD	107(27.5)	67(17.2)	62(15.9)	81(20.8)	72(18.5)
Regular screening for possible CVD will reduce complications associated with CVD	20(5.1)	21(5.4)	43(11.1)	155(39.8)	150(38.6)

Level of practices related to cardiovascular disease prevention among adults in Abeokuta

The level of practices related to cardiovascular disease prevention among adults in Abeokuta showed that 13.4% of respondents had bad practices, while 86.6% demonstrated good practices. (Table 4.7)

Table 4.7: **Level of practices related to cardiovascular disease prevention among adults in Abeokuta**

Level of practices	Frequency	Percent (%)
Bad	52	13.4
Good	337	86.6

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Table 4.8: **Relationship between the level of knowledge of adults in Abeokuta and their perception of cardiovascular diseases risk factors**

		Knowledge	Perception
Knowledge	Pearson Correlation	1	.142**
	P value		.005
Perception	Pearson Correlation	.142**	1
	P value	.005	
	Mean ± S.D	9.64 ± 2.76	57.55 ± 9.39

Objective Five: Relationship between the levels of knowledge of cardiovascular diseases risk factors among adults in Abeokuta and their preventive practices

The relationship between the levels of knowledge of cardiovascular disease (CVD) risk factors and preventive practices among adults in Abeokuta was assessed using Pearson's correlation. The results indicate a weak but statistically significant positive correlation ($r = 0.272, p < 0.001$). This suggests that individuals with higher knowledge of CVD risk factors are more likely to engage in preventive practices. However, the correlation is not strong, implying that other factors may also influence the adoption of preventive behaviors. (See Table 4.9)

Table 4.9: **Relationship between the levels of knowledge of cardiovascular diseases risk factors among adults in Abeokuta and their preventive practices**

		Knowledge	Practice
Knowledge	Pearson Correlation	1	.272**
	P value		.000
Practices	Pearson Correlation	.272**	1
	P value	.000	
	Mean ± S.D	9.64 ± 2.76	18.78 ± 3.55

Objective Six: Relationship between the perception of adults in Abeokuta and their preventive practices

The relationship between the perception of cardiovascular diseases (CVD) and preventive practices among adults in Abeokuta was examined using Pearson's correlation. The results show a moderate positive correlation ($r = 0.351, p < 0.001$), indicating that individuals with a more positive perception of CVD risk factors are more likely to engage in preventive practices. This suggests that improving awareness and perception of CVD risks may contribute to better preventive behaviors. (See Table 4.10)

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Table 4.10: **Relationship between the perception of adults in Abeokuta and their preventive practices**

		Perception	Practices
Perception	Pearson Correlation	1	.351**
	P value		.000
Practices	Pearson Correlation	.351**	1
	P value	.000	
	Mean ± S.D	57.55 ± 9.39	18.78 ± 3.55

DISCUSSION OF FINDINGS

Findings from this study indicate a moderate to high level of knowledge about cardiovascular disease (CVD) risk factors among respondents, this is supported by a similar study conducted among college staff of a Nigerian University showing the knowledge and awareness of CRFs among the participants was high, and some exhibited risk factors (Chukwuemeka et al., 2023). A majority correctly identified CVD as affecting the heart and blood vessels, recognized its symptoms, and acknowledged its preventability. However, knowledge of modifiable risk factors was relatively lower, with less than half correctly identifying examples. This contradicts a study conducted in Morocco, where most of the participants were able to identify examples of modifiable risk factors even it supports the study, where most of the participants were able to recognize symptoms of CVD (Taiek et al., 2024). This finding suggests a need for targeted health education programs emphasizing lifestyle modifications, such as diet and physical activity, to reduce CVD risk. Additionally, while most participants understood the importance of controlling blood pressure and medication adherence, awareness of the link between diabetes and CVD, as well as diagnostic tests, was suboptimal. Comparatively, studies in other populations have shown similar trends, where general awareness of CVD is high, but specific knowledge of risk factors and preventive measures varies (Taiek et al., 2024). These findings highlight the importance of continuous public health interventions to bridge knowledge gaps and improve cardiovascular health literacy.

Education and income were significantly associated with knowledge levels of CVD risk factors. Individuals with tertiary education demonstrated the highest knowledge, highlighting the role of formal education in health awareness. Similarly, higher-income earners exhibited better knowledge, suggesting greater access to health information and resources. These findings emphasize the need for targeted health education strategies, particularly for lower-income and less-educated populations, to bridge knowledge gaps and improve CVD prevention efforts. This contradicts studies that show no significant association with any socio-demographic characteristics (Hamid 2024) and a study that identified Age as the only factor that showed a significant association with the awareness of CVD risk factors (Taiek et al., 2024). However, it is supported by a similar study that states that knowledge of CRFs also increased with an increase in educational level (Chukwuemeka et al., 2023).

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Findings from the study suggest that perceptions of cardiovascular disease (CVD) risk factors are quite mixed, with more than half of the respondents holding negative perceptions. This is slightly different from a similar study conducted in southwest, Nigeria where over a quarter of the participants had a poor CVD risk perception stating that rural residents had a significantly poorer CVD risk perception than their urban counterparts (Awosoga et al., 2024), but supported by as study conducted in Ibadan north Local Government, Southwestern Nigeria stating 72.7% had a poor perception of CVD and its risk factors (Odunaiya 2021). This means that many people may not fully acknowledge or understand the risks associated with CVD, which could influence their willingness to adopt preventive measures. Education stood out as a key factor; those with tertiary education were more likely to have positive perceptions, emphasizing the role of knowledge in shaping attitudes toward health risks. A study has suggested that people with better subjective health status have increased odds of better risk perception (Guo et al., 2023). Further reasons could be connected to participants' educational level, as most of our participants had tertiary education, which could have influenced their knowledge and perception. These insights highlight the need for continuous education efforts, especially among those with lower educational backgrounds, to enhance understanding and encourage healthier attitudes toward CVD prevention.

The study underscores the importance of behavioral practices in preventing cardiovascular disease (CVD), revealing that while a majority engage in good preventive practices, a notable number still exhibit poor health behaviors. This suggests that despite a general awareness of CVD risks, certain individuals fail to translate knowledge into practice, which could be due to various socio-environmental and behavioral factors. The lack of significant associations between age, gender, marital status, and preventive practices suggests that these factors may not be primary determinants of health behaviors, a notion supported by prior research. Education emerged as a significant determinant, with individuals holding tertiary education demonstrating better preventive practices. This aligns with studies indicating that higher educational attainment is associated with increased health literacy and proactive health behaviors (WHO, 2024; Almachavan, 2024). For instance, research has shown that individuals with lower educational levels have a higher risk of adverse cardiovascular outcomes (Jilani et al., 2021). While income level did not significantly affect preventive practices in the study, the area of residence did, with rural dwellers exhibiting poorer practices compared to urban and semi-urban residents. This finding is consistent with literature indicating that individuals in disadvantaged or rural areas face higher risks of chronic diseases, including heart attacks, due to factors like limited access to healthcare and health information (WHO, 2024).

The correlation analysis conducted among adults in Abeokuta highlights a crucial interplay between knowledge, perception, and preventive practices related to cardiovascular disease (CVD). The moderate positive correlation between knowledge and perception suggests that individuals with higher awareness of CVD risk factors tend to develop more accurate and positive perceptions of their susceptibility to the disease. This aligns with the Health Belief Model (HBM), which posits that individuals who recognize health risks are more likely to take proactive measures (Fortagne et al., 2025). Studies have consistently shown that knowledge plays a fundamental role in shaping risk perception, as those with greater awareness are better equipped to assess their vulnerability and the severity of the disease (Karasneh et al., 2021; Heydari et al., 2021; Ghamri, 2024).

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

A stronger correlation between knowledge and preventive practices further supports the argument that awareness directly influences health behaviors. Individuals who understand CVD risk factors are more likely to engage in preventive measures such as maintaining a healthy diet, exercising regularly, and adhering to medical recommendations. This finding is consistent with public health research, which suggests that increased knowledge often leads to improved health behaviors, though knowledge alone may not be sufficient without motivation and enabling environmental factors (WHO, 2024). For instance, studies on chronic disease prevention have highlighted that while knowledge is a prerequisite for behavior change, additional factors such as self-efficacy, access to healthcare, and cultural beliefs play a role in sustaining preventive behaviors (Rahelić et al., 2024).

The significant correlation between perception and preventive practices is also noteworthy, as it indicates that individuals who recognize CVD risks as serious and personally relevant are more likely to adopt healthier lifestyles. This supports previous research that links risk perception with behavior modification, where individuals who perceive themselves as high risk of a disease are more motivated to engage in protective behaviors (Rahelic et al., 2024). A study on hypertension awareness, for example, found that individuals who viewed themselves as vulnerable to complications were more compliant with medication use and lifestyle changes compared to those who underestimated their risk (Hogg, 2022). This finding shows the importance of targeted health education campaigns that not only provide factual knowledge but also emphasize the personal relevance of disease risks to encourage preventive actions.

IMPLICATIONS FOR RESEARCH

The study contributes valuable insights to the understanding of knowledge levels regarding cardiovascular disease (CVD) risk factors among adults in Abeokuta. Several key findings can be highlighted:

Knowledge Levels: The study indicates that a significant proportion of the participants exhibited a high level of knowledge about CVD risk factors. This highlights the need for targeted health education to improve awareness among the population, especially considering that a notable segment of the community is not fully informed about CVD prevention.

Establishing a Knowledge-Perception-Behavior Link: The study confirms a positive correlation between knowledge, perception, and preventive practices, highlighting that individuals with higher knowledge levels are more likely to perceive CVD risks accurately and adopt healthier behaviors. This reinforces existing literature while providing localized data for Nigeria

Public Health Implications for CVD Prevention: By demonstrating that knowledge alone is insufficient without perception and behavior change, the study underscores the need for targeted interventions that not only educate but also shape perceptions and enable action. These findings can inform policies on community-based health education and behavior modification strategies.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

CONCLUSION

The study assessed knowledge, perception, and preventive practices related to cardiovascular disease (CVD) among adults in Abeokuta. Results indicated that many participants recognized CVD risk factors, with a positive correlation between knowledge, preventive behaviors, and practices. Factors such as education level and income significantly influenced knowledge and practices.

In conclusion, the study highlights the critical role of health education and awareness in improving knowledge and fostering positive perceptions regarding CVD. Stakeholders should focus on tailored educational programs aimed at enhancing understanding and perception of CVD risk factors, particularly targeting vulnerable demographics. This approach could ultimately lead to improved health outcomes through better preventive practices among the population in Abeokuta.

FUTURE RESEARCH

Future studies could explore several avenues to build on the findings of this research.

1. **Longitudinal Studies**: Implementing longitudinal designs would allow researchers to track changes in knowledge, perceptions, and preventive practices over time, thereby establishing causal relationships between awareness of cardiovascular risk factors and health behaviors.

2. **Larger and More Diverse Samples**: Expanding the sample size and including participants from various regions, socioeconomic backgrounds, and age groups would enhance the generalizability of the results and provide a more comprehensive understanding of cardiovascular risk factors across different populations.

3. **Qualitative Research**: Conducting qualitative studies through interviews or focus groups could help uncover deeper insights into the beliefs and attitudes surrounding cardiovascular diseases, providing context to the quantitative data and exploring the reasons behind the perceptions and behaviors identified.

4. **Intervention Studies**: Evaluating the effectiveness of targeted educational interventions aimed at increasing knowledge of cardiovascular risk factors could help assess whether enhancing awareness leads to improved preventive practices in various demographic groups.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

REFERENCES

Abdela, O. A., Ayalew, M. B., Yesuf, J S., Getnet, S. A, Biyazin, A. A., Lemma, M.Y., & Yimer, B. T. (2019). Ethiopian University students' knowledge and perception towards cardiovascular disease risk factors: a cross-sectional study. *Am J Cardiovasc Dis*. 9(1):1-7.

Adebayo, Y. O., Odunfa, O. M., Akinsanya, O. B., & John, E. P. (2020). Risk factors of cardiovascular diseases among staff of Federal Polytechnic, Ilaro, Ogun State. *Journal of Dietitians Association of Nigeria*, *11*(2), 43-51.

Boateng, D., Wekesah, F., Browne, J.L., Agyemang, C., Agyei-Baffour, P., Aikins, A. D.G.,... (2017). Knowledge and awareness of and perception towards cardiovascular disease risk in sub-Saharan Africa: A systematic review. PLoS ONE 12(12): e0189264. https://doi.org/10.1371/journal.pone.0189264

Chukwuemeka, U.M., Okoro, F.C., Okonkwo, U.P. Amaechi, A.i .,Anakor, A.C., Onwuakagba, I.U., Okafor, C.N. (2023). Knowledge, awareness, and presence of cardiovascular risk factors among college staff of a Nigerian University. *Bull Fac Phys Ther* 28,(1) 8 https://doi.org/10.1186/s43161-023-00119-w

Cleaveland Clinic. (2021). Cardiovascular disease. https://my.clevelandclinic.org/health/diseases/21493-cardiovascular-disease

Dankoli, R., & Amosu, A. M. (2022). Perception and hypertension prevention practices of teachers in selected secondary schools in Sagamu Local Government Area Ogun State, Nigeria. *Texila International Journal of Public Health*, *10*(1), 258-266.

Fortagne, M. A., Anderski, M., Yagiz, H., & Lis, B. (2025). Enhancing Preventive Health through Apps: An Extended Health Belief Model Approach for Widespread Adoption.

Front Cardiovasc, Med., 10 November 2022 Sec. General cardiovascular Medicine volume 9, 2022. https://doi.org/10.3389/fcvm.2022.1008335.

Gibore, N.S., Munyogwa, M.J., Ng'weshemi, S.K. *et al.*, (2023). Prevalence and knowledge of modifiable cardiovascular diseases risk factors among vulnerable population in Central Tanzania. *BMC Cardiovasc Disord* 23, 373. https://doi.org/10.1186/s12872-023-03408-3

Ghamri, R. A. (2024). Knowledge of cardiovascular diseases and associated risk factors in the general adult population of Jeddah, Saudi Arabia: A cross-sectional study examining gender disparities. *Medicine*, *103*(24), e38566.

Glanz, K., Rimer, B. K., & Viswanath, K. (Eds.). (2015). *Health behavior: Theory, research, and practice*. John Wiley & Sons.

Guo Z, Yuan Y, Fu Y, Cui N, Yu Q, Guo E, et al. Cardiovascular disease risk perception among community adults in South China: a latent profile analysis. Front Public Health. 2023;11: 1073121. pmid:37228713

Hamid , H. (2024). Level of Knowledge about Cardiovascular Disease Risk Factors among Individuals at Risk of Developing Coronary Artery Disease. *Central Asian Journal of Medical and Natural Science*, *5*(4), 1064-1070. Retrieved from https://cajmns.centralasianstudies.org/index.php/CAJMNS/article/view/2658

Heydari, S. T., Zarei, L., Sadati, A. K., Moradi, N., Akbari, M., Mehralian, G., & Lankarani, K. B. (2021). The effect of risk communication on preventive and protective Behaviours during the COVID-19 outbreak: mediating role of risk perception. *BMC Public Health*, *21*, 1-11.

Hogg, S. E. (2022). Perceptions of hypertension and treatment adherence in impoverished hypertensive adults: A qualitative analysis.

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G

Ignatowicz, A., Odland, M.L., Bockarie, .T., Wurie, H., Ansumana, R.,Kelly, A.H., …Davies J. (2020). Knowledge and understanding of cardiovascular disease risk factors in Sierra Leone: a qualitative study of patients' and community leaders' perceptions *BMJ open, 10 (12),*e038523. doi: 10.1136/bmjopen-2020-038523.

Odunaiya, N. A. (2021). Knowledge and Perception of Cardiovascular Disease and its Risk Factors among Secondary School Adolescents in Ibadan North Local Government, Southwestern Nigeria. *African Journal of Biomedical Research*, *24*(1), 65-73.

Odunaiya, N. A., Adesanya, T., Okoye, E. C., & Oguntibeju, O. O. (2021). Towards cardiovascular disease prevention in Nigeria: A mixed-method study of how adolescents and young adults in a university setting perceive cardiovascular disease and risk factors. *African journal of primary health care & family medicine*, *13*(1), e1–e9. https://doi.org/10.4102/phcfm.v13i1.2200

Article DOI: 10.52589/IJPHP-VFRGOJ7G
DOI URL: https://doi.org/10.52589/IJPHP-VFRGOJ7G