Assessment of Knowledge, Attitude and Preventive Practices towards Curtailing Coronavirus Infection among Market Traders in Ogbomoso North Local Government Area, Oyo State

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Certification

This is to certify that Olajoke Seye AJIBADE with matriculation number LCU/PG/01776 carried out this research work titled " Assessment of Knowledge, Attitude and Preventive Practices towards Curtailing Coronavirus Infection among Market Traders in Ogbomoso North Local Government Area, Oyo State" in the Department of Kinesiology, Sports Science & Health Education, Faculty of Education, Lead City University, Ibadan, Oyo State for the award of Master Degree of Education (M.Ed.) in Health Education and that this has not been previously submitted.

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Dedication

This research work is dedicated to the many victims of coronavirus especially the survivors.

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Abstract

The aim of this study was to assess the knowledge, attitude and preventive practices towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area of Oyo State. In spite of many studies conducted on Coronavirus diseases among different groups, studies on the knowledge, attitude and preventive practices towards prevention of coronavirus among major market traders is not sufficient, nor has there been identified studies related to market traders in any of the Local governments in Ogbomoso. Thus, this theses attempted to fill this gap, engaging the theories of Knowledge, Attitude and Practices Model and Health Belief Model. Descriptive survey research design was used. Simple random, proportionate and convenience sampling techniques were used to select 300 respondents; while questionnaire was used for data collection. The descriptive statistics of frequency counts, percentages and inferential statistics of Pearson Product Moment Correlation were used for the analysis. The result of the study revealed that the level of knowledge of Coronavirus infection was high (mean=1.96), attitude was positive (mean=2.64), while preventive practice was high (mean=2.56) among market traders in Ogbomoso North LGA. Furthermore, there was no significant correlation between knowledge and attitude towards coronavirus infection (r=-0.026, $p>0.05$) among the respondents. There was no significant correlation between knowledge and preventive practices (r=0.061, $p>0.05$), while attitude had significant negative correlation with preventive practices of Coronavirus among the traders (r=-0.116, $p<0.05$). The authority of Ogbomoso North LGA in collaboration with State Ministry of Health should organise periodic Health Education programmes specifically on knowledge, attitude and preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area.

Keywords: Coronavirus infection, Knowledge, Attitude and Preventive practices

Word Count: 265

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List of Acronyms

Abbreviation	Meaning
LCU	Lead City University
WHO	World Health Organisation
ACSM	American College of Sports Medicine
ISSN	International Society of Sports Nutrition
SPSS	Statistical Package Social Sciences Software
COVID-19	Coronavirus Infection
PP	Preventive Practice
MT	Market Traders
ATCI	Attitude towards Toronavirus Infection
KTCI	Knowledge of Coronavirus Infention
PPCI	Preventive Practices of Coronavirus Infection
HBM	Health Belief Model
KAP	Knowledge, Attitude and Practices
GPM	General Prevention Measures
PPE	Personal Protective Equipment
SD	Social distancing
Q	Quarantine
CD	Cleaning and Disinfection
ITC	Increasing Testing Capacity
ACD	Applications to Coronavirus Disease
CF	Conceptual Framework
ES	Empirical Study
TF	Theoretical Framework
CS	Conceptual Study
FS	Field Survey

KCIS	Knowledge of Coronavirus infection Scale
ATCIS	Attitude towards Coronavirus infection Scale
PPCIS	Preventive Practices towards Coronavirus infection Scale
SDI	Socio- Demographic Information
LSF	Likert scale format
ICTV	International Committee on Taxonomy of viruses
NCDC	Nigeria Centre for Disease Control
NRA	National Regulatory Authority
NAFDAC	National Agency for food and Drug Administration and Control
LAUTECH	Ladoke Akintola University of Technology
LGA	Local Government Area
RDT	Rapid – Diagnostic kits
SARSCov-2	Severe Acute Respiratory Syndrome Coronavirus 2

Chapter One

Introduction

1.1 Background to the Study

Globally, health challenges remain a major threat to the entire human race and issues of communicable diseases cannot be overemphasised. World Health Organization (WHO) declared coronavirus infection outbreak a public health emergency of international proportion on 30th January 2020 and proclaimed it a pandemic due to its rising cases and rapid spread across many continents of the world including the sub-Saharan African region of which Nigeria was one[1]. The magnitude of the infection revealed an estimate of over 767 million confirmed cases with over 6.9 million deaths[2]. In 2023, currently infected cases is over 20 million of which 99.8% are in mild conditions and 0.2% are in critical conditions[3].

It is crucial to note that the reported cases of coronavirus infection has become remarkably low. Recently, in April 2023, no new cases of coronavirus infection were recorded in Nigeria. In Oyo State, there were zero case of admission as at 6th of May 2023[4]. However, there is a need for caution and attention to preventive practices despite its reduced spread because the coronavirus infection has come to stay. Laxity should be discouraged to avoid the recurrence of such outbreaks. The microbe named coronavirus has crown-like spikes on its outer surface and made up of six main subtypes; alpha, beta, gamma, delta omicron and pirola the new Covid Variant also called EG.5 or Eris. Coronavirrus infection belongs to the beta coronaviruses, which are enveloped, non-segmented, single-strained with positive-sense genomes (organism's complete set of genetic instructions) [5].

The novel coronavirus infection, 2019-nCov, has been identified as the cause of an outbreak of respiratory illness that originated in Wuhan, China[5]. Also, it is widely

believed that coronavirus infection developed from animals (bats, and pangolins) which may be the intermediate host while humans are the definite hosts [6].

Coronavirus infection is contacted through inhalation of short-distance droplets and direct contact with an incubation period of 2-14 days. In most cases, the presentation is asymptomatic (no obvious sign of illness). The typical symptoms of coronavirus infection may include fever, fatigue, dry cough and diarrhoea etc. Also, when not promptly attended to, it may lead to multiple organ failures and systemic complications such as sepsis and septic shock[7]. Therefore, curtailing the community spread of the virus is essential in mitigating the devastating impact of the pandemic. This is important in a community where there is already a weak healthcare system.

Coronavirus infection affects all sectors and groups of people irrespective of type of vocation embarked upon. The devastating effect of coronavirus infection was primarily felt among healthcare workers, elderly populations and persons with underlying diseases such as cardiovascular diseases, diabetes etc. Subsequently, economy of countries experienced a turndown; big events were cancelled or postponed and physical interaction placed on hold with significant implications on the global economy, and the survival of businesses[8].

Prior information and effective awareness programme go a long way in preventing the spread of the infection and in promoting protective behaviour. The awareness created by the government at the federal, state and local levels through the social media as well as religious and non-governmental organisations aimed at knowledge improvement and correction of certain misconceptions that have been widely circulated among community members. Superstitious beliefs have largely shaped the perception of most Nigerians regarding the source and cause of coronavirous infection[9]. However, the magnitude of coronavirus infection has placed important role on

individuals for right application of information which may help to stem the tide in the community as a whole.

Several studies have reported knowledge of coronavirus infection and impact on various populations[10]. In the same vein, a study carried out among traders in three major markets in Anambra State, Nigeria revealed 99.6% had basic knowledge of coronavirus infection, whereas some major market traders did not believe and follow the guidelines in the prevention of the infection[11]. It is also very important to note that often times, knowledge does not translate to positive attitudinal behaviour. It was reported that providing expert information about Coronavirus infection significantly reduced fatalistic beliefs[12].

Attitudinal practice when positive have tendency of reducing the spread of coronavirus infection among individuals and communities. A cross-sectional study on COVID-19 among the public in Saudi Arabia revealed that majority of the respondents were knowledgeable about the infection, but had optimistic attitudes towards coronavirus infection. It further reported that men had less optimistic attitudes than women[13]. Also, a study carried out among German population showed that knowledge of vaccination recommendations was not significant on attitudes towards vaccination uptake among the adults[14].

Preventive practices are associated with lowering or minimising the spread of coronavirus infection. The significance of health as one of the basic rights of human beings cannot be overemphasised. It is a personal duty, and it is believed that self-hygiene is the cheapest and easiest way to prevent infections when carried out adequately and appropriately by individuals. A study reported among Iranian population on coronavirus infection preventive behaviours revealed significant relationship between preventive behaviours and socio-demographic characteristics of the population. Overall,

the study concluded that 50% of the population did not take the preventive behaviours towards coronavirus infection into consideration[15]. Education on precautionary measures of coronavirus infection such as wearing of face mask, regular hand washing with soap and water or with alcohol-based hand sanitizers, and social distancing have been shown to be very effective in reducing the impact of coronavirus infection[16]. A study in Florida, U.S.A reported that understanding the uptake and characteristics associated with individual prevention and information-seeking behaviour could help facilitate coronavirus infection response efforts[17].

Previous research among taxi drivers in Ethiopia found that consistent wearing of face masks, hand washing, and physical distancing can protect against coronavirus infection. Also, moderate frequent hand washing (6-10) times per day or regular hand washing with soap, hand sanitizer, gel, or spray alcohol can reduce the personal risk of developing coronavirus infection as well as the proper use of face mask was strongly associated with a significant decrease in the risk of respiratory infection[18]. Another study conducted among residents in two (2) Local Government Areas of Ibadan, Oyo State reported that fear of being diagnosed with the disease was a major barrier to their health-seeking behaviour. However, it was recommended that health experts should develop health promotion and intervention programmes tailored towards improving health-seeking behaviour of the residents[19]. Due to the nature and mode of operation of their businesses, market traders are particularly prone to contact and spread coronavirus infection. Their activities entail interacting with many people from various walks of life on a continuous basis. Many times, there are close contacts with their customers and because of the volume of trading, personal hygiene including regular hand washing appear very difficult to achieve.The areas of operations are usually crowded and oftentimes not the cleanest. Again, most of their sources of income are on daily basis;

therefore they keep coming to markets even when they feel unwell. This action may also aid the dissemination of the coronavirus infection.

Moreover, infection is the invasion and multiplication of micro organisms that are not present in the body but get into the body from outside. Infections are cause by bacteria, viruses, fungus, and parasites causing diseases and illness to living organism. Infection occures mostly as a result of unhygienic life style while hand washing is the key effective ways to prevent the spread of many types of infection and illnesss[20]. Ogbomoso town is a fast developing commercial zone in Oyo State and predominantly dominated by traders, artisans and civil servants. It comprises of five Local Government Areas which are Ogbomoso South, Ogbomoso North, Oriire, Surulere and Ogo Oluwa Local Government Area. Ogbomoso North Local Government Area is a versatile cosmopolitan area that attracts trading as well as eight major markets (Waso Market phase 1, Butcher Market, Agbada Market, Oja Jagun Market, Oja'gbo Market, Oja Oba Market, Ayanyan Market, and Waso Market phase II). Based on this premise, the study examined the assessment of knowledge, attitude and preventive practices towards curtailing coronavirus infection among Market Traders in Ogbomoso North Local Government Area, Oyo State.

1.2 Statement of the Problem

Coronavirus infection are mainly transmitted through droplets generated when an infected person coughs, sneezes, or exhales. People can contact the virus by breathing in the virus if in close proximity with the carrier, or by touching contaminated surfaces and then touch eyes, nose and mouth. Around the world, various steps have been taken to prevent coronavirus infection. However varieties of information about the virus and how to prevent it has been made available. The researcher observed that, despite the fact that coronavirus come in a variety of shapes and sizes, the market traders in Ogbomoso North

Local Government Area of Oyo State seem to have acted carelessly or unaware of the potentially fatal consequences of contracting the coronavirus infection.

Therefore, there is a need to examine people's knowledge, attitude and preventive practices to their preparedness for any significant outbreak, which is usually deadly. The denial of the existence or impact of coronavirus infection during its peak promoted the spread of coronavirus infection. Various studies have been conducted on the assessment of knowledge, attitude and preventive practices towards prevention of coronavirus infection among various groups and populations.[21] However, studies in this regard among market traders are few in Nigeria, more so in the southwest region where Ogbomoso is located. Therefore, the study examined the assessment of knowledge, attitude and preventive practices towards prevention of coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State.

1.3 Aim and Objectives of the Study

The aim of this study was to examine the assessment of knowledge, attitude and preventive practices towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area of Oyo State.

The Objectives were to:

i. assess the level of knowledge towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area.
ii. examine the attitude towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area.
iii. determine the level of preventive practices towards coronavirus infection among market traders in Ogbomoso North Local Area.

iv. ascertain the relationship between knowledge and attitude towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State .

v. determine the relationship between knowledge and preventive practices towards infection among market traders in Ogbomoso North Local Government Area, Oyo State.

vi. examine the relationship between attitude and preventive practices towards coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State.

1.4 Research Questions

The following research questions were raised and answered:

1. What is the level of knowledge of coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State?
2. What is the attitude towards the prevention of coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State?
3. What is the level of preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State?

1.5 Hypotheses

The following hypotheses were raised and tested:

Ho1: There will be no significant relationship between knowledge and attitude towards Prevention of coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State.

Ho2: There will be no significant relationship between knowledge and preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State.

Ho3: There will be no significant relationship between attitude and preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State.

1.6 Significance of the Study

The study provided empirical findings on assessment of knowledge, attitude and preventive practices towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State. Findings from this study would be beneficial to market traders, other market users, the entire community and the government. The market traders and the entire community would be equipped with the true knowledge about coronavirus infection, develop appreciation for right attitude and preventive practices towards the infection to curb its spread or resurgence. Findings of the study will help the market users to appropriate preventive practices to curb the spread and resurgence of the infections.

The government officials would also benefit from the study by understanding the knowledge of market traders and other market users about the coronavirus infection. This understanding would aid the government officials to put in place, adequate measures or policies that would curb the spread or resurgence of the infection or the outbreak of any other disease within the local government and by extension, the entire state and country. Finally, researchers would benefit from this study as it would add to the existing body of knowledge for subsequent research of this nature or related ones. Also the benefits of this study would be made known through the researcher's participation in seminars and workshops which are related to prevention of coronavirus infection and other contagious

infections. Furthermore, the dissertation would be published, in both soft and hard copies, and copies of the publication would be given to libraries and officials of Ogbomoso North Local Government Area.

1.7 Scope of the Study

The scope of the study is considered from two perspectives, namely the title scope and geographical scope. For the title scope, the study focuses on the assessment of knowledge, attitude and preventive practices towards curtailing coronavirus infection among market traders. Geographically, the study covers four (4) markets traders out of the eight (8) markets in Ogbomoso North Local Government Area of Oyo State. The markets include Butcher market, Oja Titun; Food Stuff market, Oja 'Gbo; Waso market phase 1, Sabo and Ayanyan cattle market, Ilorin express Road.

1.8 Limitation of the Study

Some of the market traders were uncooperative with the researcher and research assistants as they were unwilling to complete the questionnaire immediately. However, with explanation and persuasions, copies of the questionnaire were filled and collected at the spot. Also, some of the respondents were not educated, therefore, some copies of the questionnaire were filled by proxy. Moreover, six copies of the questionnaire were not completed correctly which made them unusable for analysis, hence, this researcher went back to the field to readminister the six copies of the questionnaire to complete the number of copies of the questionnaire as planned.

1.9 Operational Definition of Terms

The following terms are defined operationally as used in the context of this study.

1. **Coronavirus Infection (COVID – 19)**: This is an infection that emerged in the society and spread in 2020 around the world with different symptoms which causes respiratory malfunctioning and possibly death of infected individuals.
2. **Knowledge of Coronavirus Infection:** This has to do with measures of understanding and awareness of the market traders have on coronavirus infection causes, Symptoms, mode of transmission, prevention, treatment/ care seeking as well as awareness of its risk factors.
3. **Attitude towards Coronavirus Infection:** This is the perception, disposition and response, (negative or positive) of market traders towards coronavirus infection.
4. **Preventive Practices of Coronavirus Infection:** These are acts carried out to stop the spread of coronavirus infection within an environment. This involves the market traders' response to carry out frequent hand washing with soap and water, using hand sanitizers, avoiding crowds and public places, observing the 2 metres social distancing as well as using gloves and nose masks.
5. **Market Traders:** These are people who practice buying and selling goods in markets as a means of survival in Ogbomoso North Local Government Area.

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Chapter Two

Literature Review

This chapter discusses relevant literature for the study. They were reviewed under the following sub-headings:

2.1 Conceptual Review

2.1.1 Overview of Coronavirus Infection

2.1.2 General Knowledge about Coronavirus Infection

2.1.3 Attitude towards Coronavirus Infection

2.1.4 Preventive Practices of Coronavirus Infection

2.1.5 Brief History of Ogbomoso North Local Government

2.2 Theoretical Framework

2.2.1 Health Belief Model (H.B.M)

2.2.2 Knowledge, Attitude and Practice Model (K.A.P)

2.3 Review of Empirical Studies

2.3.1 Knowledge of coronavirus Infection among market Traders

2.3.2 Attitude towards coronavirus Infection among market Traders

2.3.3 Preventive Practices of coronavirus Infection amongs market Traders

2.4 Conceptual Model

2.5 Summary of Gaps in Literature

Endnotes

2.1 Conceptual Review

2.1.1 Overview of Coronavirus Infection

The novel coronavirus otherwise known as COVID-19 originated from Wuhan, China, in late 2019. The coronavirus is "a highly transmittable and pathogenic viral infection caused by severe acute respirtatory syndrome virus 2 (SARS-CoV-2)"[1]. Wuhan, a business province in China, experienced the first outbreak, which has claimed more than 5,000 lives and infected over 250,000. Health experts posit that coronavirus infection (COVID-19) probably developed from animals (bats or pangolins)[2].

The first doctor to announce the coronavirus outbreak was Li Wenliang from China, but his claim was dismissed and he died of the virus[3]. On 31st December 2019. China formally reported the incidents of pneumonia of unknown cause to the World Health Organization (WHO). By January 31st 2020, the World Health Organization directed that all protocols concerning public health and surveillance of influenza and severe acute respiratory infections be observed. By 9th January, the World Health Organizatio (WHO) had announced a rist assessment report of the Wuhan situation thus putting the world in red alert. By 11th March 2020, the World Health Organization had declared Coronavirus Infection a pandemic.

The first case of infection outside China was in Thailand in January 2020 while in Africa it was Egypt followed by Algeria and Nigeria in February 2020[4]. Gradually, the novel coronavirus spread to different parts of the world, which led to shutting down of countries and cities depending on the gravity of infection. While the World Health Organization coordinates, monitors, prescribes, regulates and reports activities at the global level, regional and national governments and institutions have taken primary lead in the management to fight against the spread of coronavirus infection in their respective

territories. The closing of various ports and setting up or activating disease control centres are determined by individual countries. Various vaccines have been developed such as Pfizer-Biotech, Johnson and Johnson, AstraZeneca/Oxford Covid-19 vaccine amoung others. Countries like Italy, the United States, and the United Kingdom have experienced high numbers of fatalities putting a lot of stress on their medical facilities. In fact, apart from conspiracy theories that have shrounded the emergence, its cure has been largely politicized, thus resulting in more fatalities[5].

In Nigeria, those hardest hit have been the most vulnerable, i.e. the elderly populations, frontline healthcare workers and persons with underlying disease such as hypertension, heart disease, diabetes etc. The Federal Ministry of Health confirmed the first Coronavirus case on the 27th of February 2020. The case was an Italina citizen who works in Nigeria and returned from Milan in Italy to Lagos, Nigeria, on 25th of February 2020. The man was confirmed positive by the Virology Laboratory of the Lagos University Teaching Hospital, which was part of the Laboratory Network of the Nigeria Centre for Disease Control[6]. In the President's first address to the nation on March 29, 2020, the President announced the lockdown in Lagos, Ogun and the Federal Capital Territory, Abuja, in order to prevent the further spread of coronavirus Infection [7].

Supportively, some state governments including Oyo State also pronounced dawn to dusk curfews to limit the operations of clubs and night parties. The first case in Oyo State was recorded in March 22, 2020[8]. Agri-food systems were often excluded from "lockdown" measures were implemented in early 2020 to contain the coronavirus infection outbreak. Yet, these rules had effects on the whole economy, suggesting that even the industries that were spared were indirectly impacted by supply chain disruptions and a decline in consumer demand. The federal and state governments imposed lockdowns in the majority of its cities and states following the discovery of the first

verified case. This includes shutting down all borders and several unnecessary enterprises. Nigeria likewise saw a decline in export demand and remittances as a result of the global recession. In Oyo State, public and religious gatherings with more than 20 people were banned; schools, offices and non-food markets and non-pharmaceutical outlets were closed down[9]. Only essential services like intra-state transportation, food markets and pharmaceutical out-fit were allowed to open, and all of these were done to curb the spread of coronavirus infection[10].

Furthermore, there are various variants of coronavirus infection. Variants or strains of viruses happen when there is a mutation to the virus's genes. It is normal for RNA viruses like the coronavirus to evolve and change over time. It is important to know that viruses mutate regularly, coronavirus infection has undergone thousands of mutations since it first emerged, but only a very small minority of those mutations is likely to be significant and change the virus meaningfully. A variant of concern is a strain of coronavirus infection which has been observed to be more infectious and more likely to cause breakthroughs or re-infections in those vaccinated or previously infected. These variants are more likely to cause severe disease, evade diagnostic tests, or resist antiviral treatment.

The types of Coronavirus that have been labelled as variants of concern are:

i. Alpha: The COVID 19 variant that was first detected in United Kingdom

ii. Beta: The COVID-19 variant that was first detected in South Africa

iii. Gamma: The COVID-19 variant that was first detected in Brazil

iv. Delta: The COVID-19 variant that was first detected in India

v. Omicron: The COVID-19 variant that was first detected in South Africa[11]

vi. Pirola (EG.5 or Eris) :The new COVID-19 variant that first dectected in Isreal and Demark

Alpha

A SARS-CoV-2 variation of concern was the Alpha variant (B.1.1.7). According to estimations, it was 40–80% more contagious than the SARS-CoV-2 wild type (with the majority of estimates falling between the middle and higher end of this range). Early in December 2020, when a phylogenetic tree displaying viral sequences from Kent, United Kingdom, seemed strange, additional researchers became aware of this variation. By the middle of December, the variation had already started to spread swiftly as infections increased[11]. This rise is assumed to be caused, at least in part, by one or more mutations in the spike protein of the virus. The variation stood out because it included more mutations than was typical. The UK accounted for more than half of all SARS-CoV-2 genome sequencing as of January 202[11].

This has led to concerns about how many additional significant variations could be present yet undiscovered over the globe. Public Health England announced on 2 February 2021 that they had found "[a] limited number of B.1.1.7 VOC-202012/01 genomes with E484K mutations" (VOC-202102/02; also known as VOC-202012/01), and that they have identified this variant[10]. Also seen in the Beta and Gamma variants is one of the mutations (N501Y). The Variant of Concern will be referred to as "Alpha" for use in public communications, the World Health Organization said on May 31, 2021.

Beta

A number of major genetic alterations in beta, also known as 501.V2 or B.1.351, are being investigated by scientists. In South Africa, it was originally discovered. All viruses, like the one that causes coronavirus infection (Covid-19), are continually evolving into new iterations or varieties. As the virus creates fresh copies of itself in order to multiply and live, these minute genetic alterations take place. Most are

unimportant, and a few may even be detrimental to the virus's ability to survive, but other variations may increase the virus's ability to spread or pose a threat to its human host[11].

The spike protein of the virus, which is what allows it to enter human cells, has undergone certain alterations. Experts are worried about these specific mutations since it is the portion that vaccines are built upon. Beta and a few other coronavirus variations, including Delta and Alpha, have been classified as "variants of concern". These have some unsettling alterations that specialists wish to closely monitor. The N501Y mutation in beta seems to make it easier to spread or more infectious. The effectiveness of vaccinations may be impacted by a different mutation known as E484K, which may enable the virus to evade an individual's immune system. There is little indication that most persons who have the South Africa variation experience more severe sickness. Similar to the original form, those who are elderly or have serious underlying medical issues are still at the greatest danger[11].

Gamma

The Gamma variant (P.1) was one of the SARS-CoV-2 variations that caused COVID-19. Lineage P.1 of SARS-CoV-2 exhibits 17 amino acid changes, 10 of which are in its spike protein, including the three regarded as very concerning: N501Y, E484K, and K417T. The National Institute of Infectious Diseases (NIID) of Japan discovered this strain of SARS-CoV-2 on January 6, 2021, in four patients who had arrived in Tokyo four days earlier after visiting Amazonas, Brazil. It was later stated that it was in use in Brazil. P.1 has been named Gamma variation under the World Health Organization's simplified nomenclature approach, and is now regarded a variant of concern[11].

Gamma caused significant infection in Manaus, the capital of Amazonas, in early 2021, despite the fact that the city had previously suffered widespread infection in May 2020, with a research revealing high seroprevalence of antibodies for SARS-CoV-2.

According to a study published in Science Journal, P.1 infected persons had a higher risk of transmission and mortality than B.1.1.28 infected people.The Gamma variety is made up of two separate subvariants, 28-AM-1 and 28-AM-2, which both possess the K417T, E484K, and N501Y mutations and evolved independently within the same Brazilian Amazonas area. Gamma is distinct from the Zeta variety (lineage P.2), which was also prevalent in Brazil. Zeta, in instance, bears just the E484K mutation and none of the other two variants of N501Y and K417T[11].

Delta

The delta version of SARS CoV-2 is a highly transmissible coronavirus that has become the most frequent variation globally. The delta variation was discovered in India in October 2020, indicating that it appeared before immunization began. It was one among the reasons of a second wave of infections in India in early 2021, and by April, it was the most frequent strain in that nation. It expanded over the world by 2021, outcompeting all other variations[11]. Delta is at least 50% more transmissible than the alpha (Kent) variety discovered earlier in the UK. Vaccines are approximately 15% less effective than alpha in preventing infection, but remain extremely effective against delta. Delta is still mutating and giving rise to new lineages. There are hints that one of these lineages, known as AY.4.2, has a little transmission advantage over the original delta form, although this remained unknown as of late 2021.

Omicron

The Technical Advisory organization on SARS-CoV-2 Virus Evolution (TAG-VE) is an impartial organization of specialists that monitors and reviews SARS-CoV-2 evolution on a regular basis, determining if individual mutations and combinations of mutations affect the virus's behaviour. The TAG-VE met on November 26, 2021, to evaluate the SARS-CoV-2 variant B.1.1.529. The B.1.1.529 variant was first reported to

WHO on November 24, 2021, from South Africa. The epidemiological picture in South Africa has been characterized by three different peaks in reported cases, the most recent of which was dominated by the Delta strain. Infections have skyrocketed in recent weeks, corresponding with the discovery of the B.1.1.529 strain. The first confirmed B.1.1.529 infection was found in a specimen taken on November 9, 2021. This variety contains a huge number of mutations, some of which are potentially harmful.

Preliminary research shows that this variation has a higher risk of reinfection than other VOCs. The frequency of occurrences of this variation appears to be growing in practically all South African regions. This variant is still detectable with current SARS-CoV-2 PCR diagnostics. Several laboratories have reported that for one commonly used PCR test, one of the three target genes is not found (referred to as S gene dropout or S gene target failure), and that this test can therefore be used as a flag for this variation pending sequencing confirmation. Using this method, this variation was found at a quicker rate than prior infection surges, suggesting that this variant may have a growth advantage. A number of investigations are under underway, and the TAG-VE will continue to examine this variation. As warranted, WHO will share additional findings with Member States and the general public. Based on the information given, the TAG-VE informed WHO that this variation should be declared as a VOC, and the WHO has designated B.1.1.529 as a VOC, naming it Omicron[11].

As a result, governments are being requested to undertake the following:

1) Increase monitoring and sequencing efforts to better understand SARS-CoV-2 variants in circulation.

2) Upload entire genome sequences and information to a publicly accessible database, such as GISAID.

3). Report early cases/clusters of VOC infection to WHO via the IHR procedure.

4). Perform field investigations and laboratory assessments where capacity exists and in collaboration with the international community to improve understanding of the potential impacts of the VOC on COVID-19 epidemiology, severity, effectiveness of public health and social measures, diagnostic methods, immune responses, antibody neutralization, or other relevant characteristics.

Individuals are urged to use established public health and social measures to lower their risk of COVID-19, such as wearing well-fitting masks, hand cleanliness, physical distance, enhancing ventilation of interior spaces, avoiding crowded places, and being vaccinated. WHO offers working definitions for SARS-CoV-2 Variant of Interest (VOI) and Variant of Concern (VOC) for your Convenience.

A SARS-CoV-2 VOI is a variation of SARS-CoV-2:-with genetic changes predicted or known to affect virus characteristics such as transmissibility, disease severity, immune escape, diagnostic or therapeutic escape; AND -that has been identified as causing significant community transmission or multiple COVID-19 clusters in multiple countries with increasing relative prevalence alongside increasing number of cases over time, or other apparent epidemiological impacts indicating an emerging risk to the global public.

A SARS-CoV-2 VOC is a SARS-CoV-2 variation that fulfills the criteria of a VOI (see above) and has been shown to be linked with one or more of the following modifications at a level of global public health relevance through comparative analysis:

-increase in transmissibility or a negative shift in COVID-19 epidemiology; OR -increase in virulence or a change in clinical illness presentation; OR -decrease in the effectiveness of public health and social interventions or current diagnostics, vaccines, and therapies

2.1.2 General Knowledge about Coronavirus Infection

Coronavirus infection is a viral disease which belongs to the family of coronaviruses, also known as Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2). The full meaning of COVID-19 is:

CO – Corona

VI – Virus

D – Disease

19 – 2019

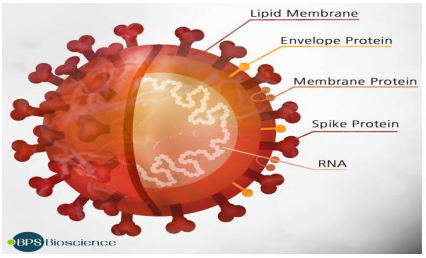

Figure 1. Corona Virus Structure

Corona means crown in Latin, and the virus needs another living organism which serves as its host to survive[12].

The coronavirus infection was discovered and caused by the severe acute respiratory syndrome coronavirus-2 (SARS-COV-2) which rapidly spread around the globe. The World Health Organization (WHO) declared coronavirus infection outbreak a global pandemic on March 11, 2020. Coronavirus infection is transmitted mainly between people through respiratory droplets and other contact routes. It is transmitted when infected respiratory droplets enter the human body through the nose and mouth. Another potential entrance point is the conjunctiva, although there are not yet adequate data to prove this information. Transmission of the virus by hands occurs through hairy contact with surfaces on which the virus has previously been deposited[13].

To stop the spread of the coronavirus infection pandemic, additional biosafety precautions are required. Dentistry is a field that deals exclusively with the oral cavity, making it extremely vulnerable to this virus and other infectious diseases. As a result, precautions must be made to reduce the spread of infection through adequate dental

health. In reality, if working in accordance with sufficient safety regulations, dentists can play a significant role in halting the transmission chain, assuming suitable procedures to limit viral agent diffusion, or in encouraging unwanted infectious disease dissemination. Dental practitioners need to be thoroughly informed about the methods by which 2019-nCoV and other viral agents propagate, how to recognize patients who have active infections, and most importantly, how to put patient and self-safety first[14]. Similarly, aerosol transmission of the virus is believed to be plausible while contrasting evidence of this position is still lacking. For healthcare workers, there is the need to pay to all possible modes of transmission and this can be done by taking appropriate protective and hygiene measures. When coronavirus infection (COVID-19) outbreak first started to spread in China, the local healthcare system was overburdened. Patients with coronavirus infection were treated by doctors and nurses who had little training in the infectious diseases[15]. As far as we are aware, there are no published works on their experiences against infection in the early days of the outbreak, attempts were made to document the experiences of these healthcare professionals[16].

Coronavirus infection infected over 20 million people and caused nearly 745,000 deaths globally in 7 months following its initial discovery in Wuhan, China . An early coronavirus infection modelling study identified Nigeria as having a high risk, high vulnerability, with a moderate with a moderate capacity to control the outbreak[17].

However, coronavirus infection is not the first pandemic that the world will experience and it may not be the last. Researchers have identified two pandemics that occurred ealier, the Asiatic cholera pandemic of 1817 to 1824 and the Spanish flu (Bubonic plague) of 1918 to 1920. The Spanish Flu of 1918, was described as the mother of all pandemics, as it is known to be the largest infiuenza pandemic in history. It was highly devastating and the happenings at its time were similar to coronavirus infection.

All activities such as social, religions, schools factories and all commercials institutios, except those as essentials were shut down. This pandemic ravaged humanity and resulted in mass death across the wold. It was recorded that about 21.5 million deaths occurred globally [18].

It is important to note that there has been some other epidemic outbreak in Nigeria that has been managed before and after the outbreak of coronavirus infection. Examples are Ebola and Diphtheria which are worthy of explanation in this section. The 2014 Ebola pandemic was introduced via Lagos Airport, same like coronavirus infection. Eight of the nineteen Ebola cases that were detected within a few weeks in Lagos and Rivers State, Nigeria, were fatal. Lagos's crowded population, overworked infrastructure, and status as a significant regional transit centre for air, land, and sea travel provided the ideal environment for the spread of Ebola. Nigeria's robust and well-planned response, nevertheless, was able to successfully contain the Ebola pandemic. As at 5th September 2022, there were 264, 014 confirmed cases and 3, 148 deaths in Nigeria, out of which Lagos State accounts for 103, 463 cases and 771 deaths due to the pandemic[19].

In Nigeria, 21 of the 36 states and the Federal Capital Territory have had 557 confirmed cases of diphtheria since the year 2023 began. The Nigeria Centre for Disease Control and Prevention (NCDC) was alerted of possible diphtheria outbreaks in the states of Kano and Lagos in December 2022. 1439 suspected cases were recorded between May 14 and April 9, 2023, of which 557 (or 39%) have been confirmed. Of the confirmed cases, 73 have died (for a case fatality rate of 13%). Nigeria has previously recorded diphtheria outbreaks, with the worst one occurring in 2011 and hitting the rural parts of Borno State, which is located in the northeast of the country. Diphtheria is a highly infectious, vaccine-preventable illness that spreads mostly via direct contact or through the air via respiratory droplets. All age groups are susceptible to the illness,

although unimmunized youngsters are most vulnerable. It may be deadly. Diphtheria antitoxin and antibiotics can both be used to treat the illness[20].

The diphtheria vaccine has significantly decreased diphtheria-related morbidity and death. On December 1st, 2022, Kano and Lagos States alerted the Nigeria Centre for Disease Control and Prevention (NCDC) of probable diphtheria outbreaks. The number of confirmed cases rose in January 2023, reaching a peak of more than 150 instances in week four of that year (ending on January 28); since then, a weekly declining trend has been seen. 1439 suspected cases of diphtheria were recorded from 21 states in Nigeria between April 9 and May 14, 2023, with the bulk (83%) of cases coming from Kano (1188), Yobe (97), Katsina (61), Lagos (25), Sokoto (14) and Zamfara (13). 557 (39%) of the 1439 suspected cases were confirmed (51 laboratory-confirmed, 504 clinically compatible, and two epidemiologically connected), 483 (34%) were rejected, and 399 (28%) are still awaiting categorization[22]. State reports of cases with laboratory confirmation came from Kano (45), Lagos (3), Kaduna (1), Katsina (1), and Osun (1). 73 fatalities were reported among the 557 confirmed cases, for a CFR of 13%. The availability of diphtheria antitoxin (DAT) has grown since the outbreak's start, among other reasons for this decline in the CFR. In the past, diphtheria epidemics were reported in Nigeria. Between February and November 2011, 98 cases were reported during the most serious epidemic in Borno State, northeastern Nigeria.

The Nigeria Centre for Disease Control (NCDC) recommends hand washing with soap and water for at least 20 seconds, social distancing, avoidance of large crowds, and regular cleaning and disinfecting of surfaces as ways to prevent the spread of the disease[21]. One of the best methods to prevent sickness has always been to wash your hands. It is a straightforward action that benefits our health and safety in several ways. Another important tenet of coronavirus infection prevention is hand washing. World

Health Organisation of South-East Asia Area has it that, "Hand hygiene needs to become an intrinsic part of our daily routine and our lives, as we live through this epidemic and beyond, to protect us from infections"[22].

Washing hands with soap and running water is crucial because coronavirus infection transmission mostly occurs through direct, indirect (through contaminated items or surfaces), or close contact with infected individuals via mouth and nose secretions. In order to prevent the transmission of coronavirus infection, it is important to wash your hands often, especially before eating, during food preparation, after touching animals or animal waste, after coughing or sneezing, and after caring for the ill. When we contact common objects, such doorknobs or handles, or when we return home from a public location, we should wash our hands to protect both ourselves and others around us. It is also crucial to encourage good hand hygiene at all levels of healthcare.

The World Health Organisation stated that hand washing is widely recognized as one of the main strategies for lowering healthcare-associated infections and improving patient safety. The epidemic is still active and has not yet passed. She stated we need to remind ourselves of the fundamental things we can all do to protect ourselves. Hand Hygiene for Everyone is the topic of this year's World Handwashing Day, which encourages everyone in society to practice universal hand hygiene. Handwashing with soap needs to be a top priority now and in the future if we are to defeat the virus now and guarantee improved health outcomes after the epidemic[23].

New Delhi residents, still maintained handwashing with soap and other public health precautions like keeping a physical distance, avoiding crowded areas, practicing cough etiquette, and donning a mask after the pandemic.This advised remain among our strongest lines of protection against the infection. Global Handwashing Day is commemorated annually on October 15 to increase awareness and emphasize the

significance of hand washing as an efficient method of disease prevention. "Hand washing has always been one of the best ways to ward off diseases." It is a straightforward action that benefits our health and safety in several ways.

Furthermore, hand hygiene must become a vital part of our daily routine and lifestyles as we adapt to the new normal and live with coronavirus infection in order to keep us healthy during the pandemic and beyond. Washing hands with soap and running water is crucial because coronavirus infection transmission mostly occurs through direct, indirect (through contaminated items or surfaces), or close contact with infected individuals via mouth and nose secretions[19].

In order to prevent the transmission of coronavirus infection, it is important to wash your hands often, especially before eating, during food preparation, after touching animals or animal waste, after coughing or sneezing, and after caring for the ill. When we contact common objects, such doorknobs or handles, or when we return home from a public location, we should wash our hands to protect both ourselves and others around us. "It is also crucial to promote hand cleanliness at all levels of health care. The Regional Director stated that hand washing is widely recognized as one of the main strategies for lowering healthcare-associated infections and improving patient safety. The epidemic is still active and has not yet stop. It was stated that , everybody need to put in practices the fundamental things we can all do to protect ourselves from any insurgences.

Hand Hygiene for All is the topic of this year's Global Hand washing Day, which encourages everyone in society to practice universal hand hygiene. Hand washing with soap needs to be a top priority now and in the future if we are to defeat the virus now and guarantee improved health outcomes after the epidemic. However, in resource-limited settings, prevention of the spread of infectious diseases is often complicated by issues such as lack of awareness and knowledge of the disease, misinformation, stigma, poverty,

limited access to healthcare services, low risk perception, cultural and/or religious belief system, porous borders, housing conditions, population density and poor public health infrastructure[20]. To better understand these issues, knowledge, attitude and practice surveys are valuable in measuring and enhancing the knowledge, attitude and practice towards diseases in the socio-cultural context of the target population, as well as to serve as a baseline to inform and improve interventions for the disease.

Earlier studies in Nigeria have assessed the COVID-19 related Knowledge, Attitude and Preventive Practice among the general population in the Northern and South-western cities. In early 2020, coronavirus infection (COVID-19) epidemic spread over the majority of the planet. In March 2020, a study was carried out on knowledge, attitude, and practice (KAP) within Hausa Muslim society in Nigeria to guide efficient public health initiatives[21]. The virus that causes coronavirus infection has spread to nearly all of the world's nations, including Nigeria, after the announcement of the outbreak of coronavirus infection in Wuhan City, China in December 2019 and subsequently ,the infection was decleared as a pandemic by the World Health Organnisation on January 30, 2020. The illness has significantly increased morbidity and death over the world in addition to disrupting economic activity. Though there is now no treatment for the virus, scientists worldwide are working furiously to develop a vaccine.

As a result, World Health Organisation has suggested a number of preventative measures to stop the virus from spreading, including social isolation, the use of a face mask, routine hand washing, etc. As the illness is still evolving, it is unclear how coronavirus infection may affect expectant mothers. However, there are concerns that it might have negative consequences on maternal and fetal outcomes because of immunologic changes that arise with pregnancy and an additional release of cytokines

that coincides with the infection. Since the nation's airspace was forcedly shut down and immigration was restricted, the sickness has reached a stage of communal change.

It is crucial to comprehend how people feel about the sickness, particularly among pregnant women who are a susceptible demographic, in order to stop the infection from spreading[22]. The purpose of this study is to evaluate how pregnant women in south-eastern Nigeria perceive the coronavirus infection. The discovery will aid in the modification of policies and recommendations for preventing the present epidemic among the obstetric population as well as other members of society. The majority of pregnant women believed coronavirus infection is real, deadly and may have negative effects on the unborn child. Consequently, they are concerned about coronavirus infection. Effective counselling and their disposition or attitude developed towards coronavirus infection may lower anxiety and improve the results of the pregnancy[22].

Generally, these studies reported high coronavirus infection related knowledge, positive attitude, and good preventive practices. Since December 2019, coronavirus infection has been a hazard for public health across the world. Institutions of higher learning in africa of the danger of coronavirus infection transmission. However, there is still lack of knowledge regarding the prevention of the infection in some environment [23]. While guidelines and recommendations for preventing coronavirus infection are in place, it is important to assess people's knowledge, practices and their attitude towards these measures to identify vulnerable groups that may be targeted for robust interventions.

A one-size-fits-all approach to coronavirus infections containment may not be ideal due to socio-cultural differences across different regions in Nigeria, which impact health behaviour, thus necessitating a community-based approach for health interventions[24]. To the best of this researcher's knowledge, no study has been conducted in the city of Ogbomoso to assess the coronavirus infection related knowledge, attitude

and preventive practices among the traders during the early stages of the coronavirus infection outbreak and when it was its peak.

Major Signs and Symptoms of Coronavirus Infection

These strain of viruses cause common cold and more severe respiratory diseases. These symptoms appear within 2-14 days after exposure to the virus. The average incubation period is 5 days. The symptoms include: fever, cough, sore throat, tiredness, malaise, difficulty in breathing, aches and pains, loss of smell and taste, myalgia, nasal congestion, diarrhoea, nausea, loss of smell and taste[25]. Some people may have the infection without showing the symptoms. These are the asymptomatic people who carry the virus but do not show symptoms.

Routes of Transmission

Coronavirus infection is a highly contagious disease. It can be transmitted directly from an infected person to another person. Different-sized droplet particles can spread respiratory illnesses; when the droplet particles are >5-10 m in diameter, they are known as respiratory droplets, and when they are 5 m in diameter, they are known as droplet nuclei. Current research indicates that respiratory droplets and direct touch are the main means by which the coronavirus infection virus spreads between individuals[26]. Those infected with the disease and are not showing symptoms of the infection can also transmit the virus. These groups of persons are called carriers. Therefore, coronavirus infection can be transmitted through these means:

a. Direct contact from person to person (Human – Human transmission): This occurs between people who are in close contact with one another (about 1 meter or 3 feet). This transmission occurs when respiratory droplets are generated via coughing, sneezing, or talking, and contact with mucosal surfaces like the eyes,

nose, or mouth. Respiratory droplets are large and cannot remain suspended in the air. This is the reason why they are usually dispersed over short distances.

b. Indirect from infected materials to humans: This occurs when a person touches contaminated surfaces/vomits/objects or objects or susceptible mucosal surfaces such as eyes, nose, or mouth with the same hand[26].

People at risk of getting infected

Everyone is at the risk of contracting coronavirus infection because the virus affects all ages. Health workers have an additional job-related risk. People with greater risk of severe disease include:

- The elderly and weak
- People with chronic illnesses such as diabetes, heart disease, hypertension, stroke among others.
- People with lower body's immunity such HIV/AIDS
- Risk of death higher in elderly people with underlying medical issues

General Preventive Measures (GPM)

To reduce the risk of coronavirus infection spread, all members of the public are advised to adhere to the following measures:

1. Wash your hands frequently with soap and water for at least 20 seconds or use an alcohol based sanitizer if water is not available.
2. Avoid touching eyes, nose and mouth with unwashed hands
3. Avoid close contact with anyone showing symptoms of respiratory disease
4. Maintain at least 3 meters (6 feet) distance between yourself and anyone coughing or repeatedly sneezing
5. If a tissue is not available, cough into your elbow.
6. Avoiding large gatherings, and staying at home

7. Observe Social distancing
8. Self-isolation if any of the symptoms is observed
9. Clean frequently touched surfaces such as door knobs or handles, phones, tables with soap and water. Regular disinfection of equipment and operational surfaces and areas.
10. Get vaccinated [27].

2.1.3 Attitude towards Coronavirus Infection

i. Concept of Attitude

In psychology, attitude is a psychological concept that describes a person's mental and emotional make-up, their approach to something, or their own viewpoint on it. Their thoughts, viewpoint, and sentiments are all a part of attitude. Attitudes are intricate and developed via experience in life. An individual's attitude is their predisposition state of mind with regard to a value, and it is sparked by how they respond to themselves, another person, a location, a product, or an event (the attitude object), which then affects how they think and behave. Attitude is said to be the most distinctive and indispensable concept in contemporary social psychology[28].

The sentiments people have about themselves and the world are the attitudes in psychology that are easiest to understand. This hidden psychological construct was dubbed "the most distinctive and indispensable concept in contemporary social psychology" by well-known psychologist Gordon Allport. The history and present of a person might influence their attitudes. Consumer behaviour, attitude change, attitude-behaviour correlations, and attitude strength are important subjects in the study of attitudes. An attitude is “a process of individual consciousness which determines real or possible activities of the individual in the social world”[29]. It is people’s disposition towards health issues. Attitudes are defined “as verbalized or verbalizable tendencies, dispositions, or adjustments towards certain acts”[30].

Changes in mental, physical, and social abilities are a natural part of aging. Many of these changes, such as deteriorating health, memory loss, or sorrow following the passing of friends and loved ones, are felt as forms of loss. Loss experiences can have a severe impact on one's health, but some people manage to stay healthy despite these undesirable occurrences, which leads to a range of good health-related outcomes. One's health attitude is the overall assessment of their own health as great, good, fair, or bad, much like any attitude, which involves a summary judgment, positive or unfavourable, of a concept, object, or circumstance. Usually, a good attitude toward one's health is reflected in one's actual state of health.

Numerous large-scale population health surveys conducted in North America and Europe have found that respondents' self-evaluations are generally consistent with more objective measures of their health, such as doctor ratings, utilization of health services, diagnosed chronic conditions, or days of reduced activity due to health problems. Additionally, it has been demonstrated that poor self-rated health is a strong predictor of mortality. Consistent beliefs and practices are also likely to be linked to a favorable attitude toward health[31].

A person with a good health outlook may consistently believe that they are not particularly prone to sickness, whereas a person with a negative outlook may only sometimes or never practice actions that promote their health. These connections are further believed to be reciprocal, i.e., adopting healthy behaviours encourages adoption of a healthy mindset and vice versa. The health belief model and the theory of planned behaviour, which characterize beliefs as a cause and conduct as a result of health-related attitudes, have both been validated by prior research. According to research on cognitive dissonance and self-perception theory, behaviour may also be a source of attitudes. A person's psychological traits, particularly their optimism and sense of control over life's

events, can also influence their attitude about their health. High levels of optimism and perceived control consistently have a more positive outlook on health and are better able to deal with health issues than high levels of pessimism and low levels of perceived control[32].

Last but not least, how people describe a health-related incident might influence how favorably they regard their health. People who attribute unfavorable occurrences (like heart attacks) to stable causes (like genetic composition) will have a more pessimistic outlook on their health than those who attribute the incident to an unstable cause (like an unhealthy lifestyle). These traits may be used to explain how dispositions like optimism or a sense of control affect attitudes toward one's health. Additionally, studies in achievement contexts imply that these attributions may be the target of psychotherapy intervention, providing one method that individuals might develop a positive attitude about health[33]. However, it is still unknown if these forced attitudes offer the same level of security as those that develop naturally.

Positive health attitudes have been linked to largely positive health outcomes, as further assessments have shown. People who have a good attitude toward their health tend to live longer than those who do not, other things being equal. Positive attitudes towards health can, however, also be used as a kind of defense, which can have unfavorable effects. People may continue to engage in unhealthy habits like smoking or forego healthy ones like using sunscreen because their optimistic outlook on health prevents them from realizing the potential health risks associated with these decisions. Finally, one's attitude towards health can have a symbolic purpose by reinforcing the growing importance that individuals place on their health as they become older.

Attitude/Perception towards Coronavirus Infection

Studies have shown that some people had a positive attitude towards coronavirus infection, and some others had a poor attitude towards it. Regarding people's willingness to carry out a COVID-19 test, a study conducted in Cameroon observed that 72% of the participants were willing to undergo COVID-19 test voluntarily, and 47% of these participants preferred taking medical from home instead of the hospital if tested positive. Participants opted for personal care because of fear of infection at hospital[34]. A research carried out on behavioural change in 2019 and 2020, showed that washing hands during the pandemic was 63% before eating at home, 55% before eating at a restaurant, and 53% after coughing, sneezing or blowing the nose. This data suggests how poor people's attitude was towards washing their hands during the pandemic.

Sticking to a new behavioural pattern for humans is not easy. In Cameroon, studies revealed that the number of participants who reported they would turn to auto-medication in case of coronavirus infection significantly reduced two months after the beginning of the pandemic. The Cameroonian government has been implementing comprehensive policies to stop coronavirus infection transmission since March 2020. Yet, it is unclear how effectively these novel tactics are working as the epidemic develops. To evaluate Cameroonian adults' preventative behaviour during the coronavirus infection outbreak, we ran a six-month online survey.

Based on self-reported compliance of the following preventative measures—physical separation, face mask use, hand cleanliness, refraining from touching one's face—a five-point adherence score was created. 73.3% of the 7381 answers from male respondents and a mean age of 32.8 10.8 years were used to analyse the predictors of adherence using ordinal logistic regression models. On a scale of 0-5, the overall mean adherence score was 3.96 1.11. Mean weekly adherence ratings were initially high, but

steadily reduced over time, followed by an increase in coronavirus infection incidence over the last trial weeks. Higher age, getting coronavirus infection information from health providers, and agreeing on the need for lockdown measures were all predictors of increased adherence. Nevertheless, having flu-like symptoms was linked to poor adherence.

Continued adherence to preventative measures should be urged among Cameroonians in the medium to long term to avoid a rebound of coronavirus infections[34]. While the coronavirus infection pandemic has affected various nations in differing degrees, dealing to the issue has confronted most governments with unprecedented challenges. In this environment, assessments are crucial tools for facilitating real-time exchange of learning on what works, what doesn't, what may work, and for whom. This report derives insights from reviews of coronavirus infection responses conducted by governments themselves. It compiles findings from 67 similar evaluations conducted in OECD nations during the first 15 months of the epidemic. These first assessments demonstrate that many countries reached similar findings, allowing us to uncover key lessons that might feed into ongoing policy responses to the crisis - as well as boost future resilience. This positive trend developed from the health stakeholders' and governments' implementation of preventive measures[35].

The involvement of healthcare workers (HCWs) in patient management is important and can act as a condition for hospital and community transmission. Nigerians had great understanding, a positive attitude, and solid practice in relation to coronavirus infection. Yet, there were instances of insufficient information, unfavourable attitudes, and undesirable practices[36]. In terms of healthcare workers attitude towards coronavirus infection, a study in Nigeria showed that more healthcare workers were unwilling to treat coronavirus infected patients even if they were well compensated. However, few (80)

participants were willing to attend to a coronavirus infection patient so long they are adequately compensated[36].

In addition, the misunderstandings and misinformation of people on coronavirus affects their attitude towards it. Some people believe that the infection does not exist while some people believe that it is the disease of the rich or people who travelled overseas. Also some people feel, since they do not know anyone who contacted the infection, this set of people may not observe coronavirus infection precautions. Another wrong belief is that alcohol drinking improves immunity and it is a fast solution to coronavirus infection. Unfortunately, 728 Iranians died of alcohol poisoning[37]. All of these beliefs influence the attitude of Nigerians towards the infection. Therefore, attitude towards coronavirus infection and its preventive measures like hand hygiene, social distancing, use of face masks and avoidance of crowded areas are essential in controlling the spread of coronavirus infection.

The above is in contrast with some studies where the participants had reported not using nose masks in crowded areas and when leaving home. Two studies showed that females were more negative towards coronavirus infection prevention than males. According to a study conducted in Ethiopia among traditional healers and religious clerics, the study revealed that most respondents believed that coronavirus infection was a result of God’s punishment[37]. Coronavirus infection (COVID-19) knowledge, attitude, perception, and preventative actions are critical in its prevention and management. Many studies have found that the majority of individuals in Sub-Saharan Africa did not follow the World Health Organization's (WHO) respective country health ministries' prescribed health and safety precautions.

Noncompliance is mostly due to ignorance and misinformation in most Sub-Saharan African nations, creating concerns about people's understanding, attitudes,

perceptions, and behaviours with coronavirus infection in these situations. This scenario is especially concerning for governments and public health professionals. Consequently, the goal of this scoping review is to map information on coronavirus infection knowledge, attitudes, perceptions, and preventative practice (KAP) in Sub-Saharan Africa (SSA). It was even held that traditional healers and religious clerics were better at managing coronavirus infection compared to physicians. Therefore, further education is needed to convey the importance of forming a positive attitude to reduce the contraction and transmission of coronavirus infection[38].

2.1.4 Preventive Practicess of Coronavirus Infection

Preventive measures are the present-day approach to the spread of coronavirus infection. Early screening, attention and treatment are required to inhibit the spread of the infection. Preventive strategies are targeted at the isolation of infected persons and careful control of the coronavirus infection, including necessary means to be used while diagnosing and providing medical care to infected persons. Most crucial strategy for the public to undergo is frequent washing of hands, use of hand-size alcohol-based sanitizers as well as avoiding making touches to the face and mouth after interacting with a most likely unsafe environment. Particular protective measures are discussed below:

i. Personal Protective Equipment (PPE)

The use of face mask may primarily act as a means of controlling the source. This means using face mask can be very relevant in severe situations where the amount of non-symptomatic yet infected people in the vicinity can be said to be much. Using a face mask is good especially when going to busy areas, shopping centres, market places, when boarding public vehicles; and at certain offices and professions that require physical closeness to many people. In USA, the Centre for disease control updated their recommendations in the beginning of April 2021 to urge individuals to use homemade

masks or bandanas when they are in public gatherings where social distancing is not possible, especially in places with considerable community transmission[39].

The usage of cloth face-masks by Americans to prevent the spread of coronavirus infections was encouraging, and the most recent scientific findings could persuade even more people to do so. In an editorial that was just published in the Journal of the American Medical Association (JAMA), the Centres for Disease Control and Prevention (CDC) reviewed the most recent research and stated that cloth face coverings are an essential weapon in the fight against coronavirus infection that may help to stop the disease's spread, especially if they are used consistently in the communities. The likelihood that persons with coronavirus infection will not transfer the illness to others was high, according to mounting research. Moreover, there is provision for coronavirus infection medical kit at home in case of emergencies, and they are made up of the followings: paracetamol, mouthwash and bedartin for gargling, oximeter, B. Complex, Vitamins C and D, oxygen cylinder for emergencies, plus remember to do breathing exercises and follow all the guidelines[40].

ii. Social Distancing

Social distancing is intended to limit interactions among persons in a broader community. Social distancing is very important in places where community transmission is assumed to happen, but the links between them is unclear, and where restrictions placed only on persons known to have been unprotected is considered inadequate to avert advance transmission. People are instructed to maintain social distancing by staying 2meters (6feets) distance away from anyone sneezing or coughing[41]. To promote social distancing, closure of schools or office buildings and suspension of public markets and cancellation of gatherings were encouraged. In public markets where it is not easy to maintain social distance, limiting personal relationships and encouraging of online

shopping can reduce the frequency of contact. Offices and workplaces are also one of the high-risk areas for coronavirus infection transmission. Therefore, working from home is encouraged. In workplaces where home office work is not possible, obedience to endorsements of World Health Organization remains quite important[42].

iii. Quarantine

Quarantine is a good tool for monitoring outbreaks of communicable disease. This public health strategy was employed in the 14th century in Italy, when ships coming to Venice Port from plague-infected places were asked to anchor and tarry for 40 days (quarantine is 40 days in Italia language) prior to disembarking their healed passengers[43]. World Health Organization recommended that relatives of patients with laboratory-confirmed coronavirus should be quarantined for at least 14 days starting from the last time they were in contact with the patient[44].

The World Health Organisation declared a public health emergency of international concern involving the coronavirus infection epidemic (COVID-19) on January 30, 2020. scientist are still studying measures to stop the spread of the illness to new areas or to lessen human-to-human transmission in regions where the virus that causes coronavirus infection is already prevalent as the outbreak continues to develop. Quarantine is a public health practice that involves limiting the mobility of healthy people who may have been exposed to the virus or separating them from the general population with the aim of monitoring their symptoms and guaranteeing early case discovery. The legal right to enforce quarantine is held by several nations. Only when a thorough set of public health response and containment measures is being used, should a quarantine be instituted.

iv. Cleaning and Disinfection (CD)

It is crucial that different spots are cleaned and disinfected during the outbreak of a pandemic. Surfaces frequently touched like bedside, tables, taps and handles of doors are properly sterilized daily with common house-hold sterilizers which contain a bleach solution that is diluted. For surfaces that would not tolerate bleach, use of 70% ethanol is advised. Restrooms are cleaned and sterilized with a bleach solution that is diluted. One-use gloves should be used when vacuuming or taking care of surfaces, or clothing, stained with bodily fluids.

Non reusable infected items should be retained in lined containers before disposal to other domiciliary waste. Clothes, bed sheets, and towels must be safe with the aid of laundry detergent and water. Disposable gloves must be employed when handling surfaces and clothes which have come in contact with bodily fluids. All disposables infectious items must be kept in a safe container before discarding with other waste generated from the home.

v. Increasing Testing Capacity (ITC)

This is another crucial way of preventing the spread of coronavirus infection across societies is to raise the number of tests, identify more cases, isolate the people, and identify those people that have maintained contact with them. In view of this, increasing the capacity of laboratories' testing and creating newer testing patterns are of topmost necessity. Several methods including Rapid-Diagnostic Kits (RDT), serologic techniques and researcher-developed specimen tests are being used worldwide to detect cases which propel adherence to the rules of isolation[45]. All ministries in Nigeria also released general guidelines on coronavirus infection prevention and control measures in each organization[46].

Nigeria responded quickly and forcefully to coronavirus infection, building on its pre-existing readiness for the pandemic and taking notes from other regions of the world where transmission had already started. The first reaction of the nation included prompt activation of the national EOC at the NCDC, formation of the multi-sectorial coronavirus infection PTF, and forceful measures to halt foreign travel and impose a time-limited lockdown in severely afflicted areas. Nigeria likely decreased the pace of viral transmission by swiftly applying this package of measures and purchased more time to put up a reliable case detection, testing, and treatment centre capability.

vi. Vaccination

With everything going slow or approaching a stop, scientists and health care workers have dived into trying to locate a permanent remedy to restore life to normal. Multi-system efforts in research are on-going in pursuit of the development of smore vaccines to prevent coronvirus infection. These vaccines possess diverse working patterns to defend humans against the infection[47]. One of the best strategies for preventing morbidity and death from endemic and emerging risks continues to be vaccinations. These developments could signify the beginning of a new vaccination era. Unfortunately, their effectiveness and beneficial effects on human health worldwide are threatened by disinformation and the ensuing scepticism of immunizations. More than ever, it is crucial for scientists to use conventional and social media to spread scientific truth and inform the public about the advantages and safety of vaccinations. Consequently, vaccine science must incorporate social sciences as well as other fields like virology, immunology, bioinformatics, and systems biology in the future.

Numerous vaccines are created to protect individuals from both transmission and adverse effects of coronavirus infection. Nigeria considered different types of coronavirus vaccines based on their efficacy, safety, availability, disease epidemiology

and rectification by the National Regulatory Authority (NRA) which is NAFDAC. A number of vaccines available and currently in use are listed as follows; Sinovac Vaccine, AstraZeneca/ Oxford Vaccine, Morderna (Mrna- 1273) Vaccine, mRNAPfizer-BioNTech Vaccine, Johnson and Johnson Vaccine, Novavax Vaccine, Sinopharm Vaccine etc[48].

Types of Coronavirus Vaccines

These are some of the types of COVID-19 vaccines that have been approved. They include:

1. **Whole Virus Vaccine**: The whole virus vaccine uses a weakened or deactivated COVID-19 pathogen to trigger protective immunity. COVID-19 vaccines in this category include Sinovac and Sinopharm. The whole viral vaccination employs a weakened or deactivated version of the pathogen that causes coronavirus infection to induce protective immunity against it. The two vaccines listed above, Sinopharm and Sinovac, both employ inactivated pathogens, which means they cannot infect or multiply cells but can stimulate an immune response.

Benefits: The Vaccine Alliance (GAVI), the advantages of an inactivated whole virus vaccine include its well-established technology, suitability for those with impaired immune systems, and ease of production.

2. **RNA or mRNA Vaccine**: The COVID-19 RNA vaccine comprises mRNA molecules made in a lab that code for parts of the SARS-COV-2 virus. Once it is injected into the body, the mRNA instructs the cells to produce antigens such as the spike protein mentioned, which are then detected by immune cells, triggering a response by the body s lympnocytes COVID-19 Vaccines in this category include Pfizer-BioNTech and Moderna. The Messenger RNA (mRNA) variety might be mistaken for a wholly novel

medical treatment as no other licensed or authorized vaccination currently in use employs this sort of technology. However, other mRNA vaccines have been investigated in the past for a variety of ailments and diseases, such as cytomegalovirus (CMV), influenza, rabies, and the Zika virus.

Center for Disease Control and Prevention (CDC) states that researchers have been researching and working with mRNA vaccines for decades. These vaccines have gained popularity because they may be created in a lab using components that are easily accessible. This means that the procedure may be standardized and scaled up, which will speed up the creation of vaccinations compared to conventional approaches. So, how is it supposed to function? The COVID-19 RNA vaccine comprises of laboratory-produced mRNA molecules that encode for the spike protein of the SARS-CoV-2 virus as well as other SARS-CoV-2 viral components. After being injected into the body, the mRNA directs the cells to create antigens, such the spike protein described, which are subsequently recognized by immune cells and cause a reaction by the body's lymphocytes. The B-cells and helper T-cells assist the generation of antibodies while the killer T-cells kill the infected cells. In the future, everybody exposed to the coronavirus infection would have an immune system that recognizes it and can combat the infection.

Benefits: According to the PHG Foundation at the University of Cambridge, benefits include good safety (because there are no living components, there is no possibility of the vaccine causing infection), dependability, and that it is rather straightforward to create.

Unanticipated consequences, such as an unanticipated immunological response, assuring effective transport into the body (because free RNA in the body is quickly broken down), storage concerns, as well as the fact that this form of vaccination has never before been licensed for use in humans, present challenges.

3. **Non-Replicating Viral Vector**: This type of vaccine introduces a safe, modified version of the virus known as “the vector” to deliver the genetic code for the antigen. In a coronavirus infection vaccine, the vector is the spike proteins located on the surface of the coronavirus infection. The cells will be instructed to produce many antigens once the body’s cells are infected, triggering an immune response. Vaccines in this category include Oxford A’ straženeca and Sputnik V. What to know: In this kind of vaccination, a secure, altered variation of the virus is used as "the vector" to convey the genetic code for the antigen. The spike proteins on the coronavirus's surface serve as the "vector" in a COVID-19 vaccine. The body's cells are taught to create a huge number of antigens after becoming "infected," which in turn sets off an immune response[48].

Benefits: Because it uses both B cells and T cells, viral vector-based immunization is another well-established technique that can elicit a potent immune response.

The efficacy of these vaccinations may be reduced by prior exposure to the vector, and their production is more difficult than that of other vaccines.

4. Protein subunit vaccines include harmless pieces (proteins) of the virus that cause infection instead of the entire germ. When vaccinated, the immune system recognizes that the proteins do not belong in the body and they begin to make Tlymphocytes and antibodies. If one is ever infected in the future, memory cells will recognize and fight the virus. Vaccines in this category include Novavax.

Safety of coronavirus infection Vaccines. Coronavirus infection vaccines are safe and effective. Currently, over 40 million coronavirus infection vaccine doses have been administered in 50 mostly high-income countries. These vaccines have been evaluated in tens of thousands of participants in clinical trials. Intense vaccine safety monitoring systems have also been established to ensure that coronavirus infection vaccines are safe. As the lead regulatory agency in Nigeria, National Agency for Food and Drug

Aministration and Control (NAFDAC) has provided technical guidelines and rigorous scientific standards to guarantee vaccine safety. All coronavirus infection vaccines administered in Nigeria have been approved as safe for use in Nigeria by National Agency for Food and Drug Admimistration and Control. To elicit an immune response, the protein subunit vaccination uses pure "pieces" rather than the entire disease. The immune system's ability to attack just the whole infection is believed to reduce the chance of adverse reactions.

Benefits: Protein subunit vaccination is another well-known technique that is beneficial for those with weakened immune systems.

There are certain difficulties in producing this kind of vaccination, and booster injections and adjuvants may be necessary[48].

2.2 Theoretical Framework

2.2.1 The Knowledge, Attitude and Practice (K.A.P.) Model

Knowledge, Attitude and Practice (K.A.P.) Model: a health behaviour change theory proposed by western scholars in the 1960s. Traditionally, this has been one of the basic assumptions for health education[49]. The K.A.P. model is based on the assumption that knowledge precedes attitude and that both knowledge and attitude would both predict and precede behaviour or practice. In other words, if you increase somebody's knowledge about a health problem, it is believed that this will positively influence his attitude to the problem and in turn the positive attitude will also positively influence the individual's behaviour or practice[50]. The K.A.P. model suggests that the right information will influence attitudes and thus change behaviour. Thus the three main approaches to persuasion among health educators have been:

i. **Education**: Aimed at exploring attitudes and behaviour and to reward change
ii. **Propaganda**: Which is often directed at manipulating attitudes and behaviour

iii. **Community Development**: This assists the discovery of attitudes and behaviour and may influence the community people's readiness to accept a health education initiative or a change process.

The KAP theory divides the process of human behaviour change into three steps: acquiring knowledge, generating attitudes/beliefs, and forming practice/behaviours, during which human health behaviours can also be effectively changed[51]. Several studies showed that the level of KAP in individuals has a direct link to their efficient management of illness, their response to medical treatment, and the promotion of their health.

In order to strengthen the K.A.P model, a health promotion approach, which includes five programme elements, served as enrichment. This framework of general goals and theoretical principles for health promotion was used successfully for the implementation of a heart disease prevention project in North Carolina, U.S.A. The components of this framework are as follows:

a. improved prevention services
b. Information to educate people about their health
c. Persuasion to motivate people
d. Training to increase skills of self-control, environmental management and social action.
e. Community organization to create social support

Application of Knowledge, Attitude and Practices (KAP) Model on Coronavirus Infection

The KAP model is applicable to the approach in studying corona virus. The KAP model is based on the assumption that the knowledge of coronavirus infection precedes attitude to it and that both knowledge and attitude towards coronavirus infection would

both predict and precede behaviour or practice in preventing it. In other words, if somebody's knowledge about coronavirus is increased, it is believed that this will positively influence his or her attitude to the coronavirus infection and in turn the positive attitude will also positively influence the individual's behaviour towards protections against coronavirus infection. Hence, the right information to build up right knowledge that will influence attitudes positively should be passed so that there would be positive change in behaviour regarding the coronavirus infection.

2.2.2 Health Belief Model (H.B.M)

The "Health Belief Model" (HBM) was put forward in the 1950s, and this pointed out that the formation of health beliefs played a key role if people would accept persuasion, change their bad behaviour, and adopt healthy behaviour. This theory presents the progressive relationship between knowledge, attitudes and behaviour. While knowledge is the foundation of behavioural change, belief and attitudes are the driving force for behavioural change[52]. The health belief model was developed by social psychologists which include Irwin M. Rosenstock, Godfrey M. Hochbaum, S. Stephen Kegeles, and Howard Leventhal at the U.S. Public Health Service. They aimed to have a better understanding of the widespread failure of screening programs for tuberculosis[53]. Few studies have examined the cost-effectiveness of screening for active TB, despite the fact that a number of relatively recent CEAs have concentrated on LTBI screening and diagnostic testing. In situations with a high incidence of TB, CEAs of community-wide ACF indicate that this intervention may be cost-effective or perhaps very cost-effective. ACF among (near) TB contacts was discovered to be (very) cost-effective in both low- and high-TB incidence environments.

The evidence for the cost-effectiveness of HIV screening is not as robust as it is for TB contacts, the evaluated studies do imply that the intervention can be (very) cost-

effective depending on the baseline prevalence of TB and test volume. The health belief model has since been applied to predict various health-related behaviours.

There are six HBM construct: perceived susceptibility, perceived seriousness/severity, perceived benefits, perceived barriers/costs, cue to action and self-efficacy.

- Perceived Susceptibility

Some people engage in healthy behaviours only when they know they are at risk of an illness. The health belief model predicts once individuals perceive that they are susceptible to a particular health problem, they would engage in behaviours that could reduce their risk of developing it[54]. Individuals with low perceived susceptibility may deny they are at risk for contracting a particular illness, while others may acknowledge their possibility of developing the illness, but believe it is unlikely.

- Perceived seriousness/Severity

It encompasses beliefs about the disease itself (e.g., whether it is life-threatening or may cause disability or pain) and broader impacts of the disease on functioning in work and social roles. According to the health belief model, people's perceptions of the advantages and obstacles to taking action, as well as their self-efficacy, determine whether they engage in or refrain from engaging in behaviours that promote their health. The health-promoting behaviour must also be prompted by a stimulus, often known as a signal to action[55]. For instance, an individual may perceive that coronavirus infection is not medically severe, but if they perceive that there would be serious financial consequences due to (for example), being absent from work for several days, they may perceive coronavirus infection to be a particularly serious condition.

- Perceived Benefits

Perceived benefits are an individual’s assessment of the value they may gain or the efficacy of their engaging in a health-promoting behaviour in order to decrease the risk

of a disease. The Health Belief Model (HBM) contends that messages will be effective in affecting behaviour change if they successfully address perceived obstacles, advantages, self-efficacy, and threat. Although the model appears to be the appropriate explanatory framework for communication research, theoretical restrictions have restricted its implementation in the area. The HBM presently lacks a definition for variable ordering, which is noteworthy. So, it is not obvious whether constructions mediate connections serially, parallel, or in combination with a moderator (moderated mediation) [56]. For example, individuals who believe wearing a face mask prevents the spread of coronavirus infection are more likely to wear face mask than individuals who believe that wearing a face mask will not prevent the spread of coronavirus infection.

- Perceived Barriers or Cost

Beliefs about potential costs (economic, physical, and psychological) involved in understanding the suggested preventive or curative action. Both curative and preventative healthcare options build up individuals' health stocks and boost economies' productivity. Yet, due to a lack of medical resources, rises in preventative health spending outpace increases in therapeutic spending, and vice versa. As a result, both the population's health and economic growth are hampered. Such services are more in demand in economies with greater incomes than in those with lower incomes. Income has significant beneficial implications on the usage of preventative care[57]. Health-related behaviours could also be a product of perceived barriers to taking action. A perceived barrier refers to an individual's assessment of the obstacles to behaviour change.

- Cue to action: Exposure to information that prompts people to action
- Self-efficacy: the confidence in one's ability to succeed

Applications to Coronavirus Infection (ACI)

The health belief model will be used to develop effective interventions to change coronavirus behaviours. This is done by targeting various aspects of the model's key constructs. Interventions based on the health belief model has the potential to increase perceived susceptibility to and perceived seriousness of coronavirus by providing education about the prevalence and incidence of the virus, including individualized estimation of risk, and information about the consequences of coronavirus infection. Such consequences may be financial and social. Interventions may also aim to alter the cost-benefit analysis of engaging in the health-promoting behaviour in coronavirus infection situation, for example, increasing perceived benefits and decreasing perceived barriers.

This can be done by providing information about the efficacy of various behaviours to reduce risk of the virus, identifying common perceived barriers, providing incentives to engage in health-promoting behaviours concerning coronavirus infection, and engaging social support or other resources to encourage the behaviours. Also, interventions based on the health belief model may provide indications of action that would remind and encourage people to engage in behaviours that promotes health. Interventions may target boosting self-efficacy by providing training in health-promoting behaviours in corona virus situations, particularly for complex lifestyle changes such as changing diet or physical activity, and adhering to a complex medication regimen. It can also be aimed at the individual level, like working one-on-one with individuals to increase engagement in coronavirus-related behaviours or the societal level, for example, through legislation and changes to the physical environment.

2.3 Review of Empirical Studies

2.3.1 Knowledge of Coronavirus Infection among Market Traders

Traders in Nigeria have a form of knowledge about coronavirus infection. The government made sure information about the infection spread across from the cities to the villages via mouth to mouth messages, billboards and paper adverts, social media and newspapers, radio and television, church leaders, school authorities, community leaders among other means. Traders in Nigeria did not lack knowledge of the virus; however, some had the wrong knowledge. Some believed rumours above the truth.

A study conducted in Anambra, shows that most of the market traders are aware of coronavirus infection (up to 99.62%) [58]. Generally, traders knew that coronavirus infection was a highly infectious diseases that spread through air and droplets. SARS-CoV-2 can be transmitted by contact, droplet, aerosol, fomite, fecal-oral, bloodborne, mother-to-child, and animal-to-human routes. Some patients infected with SARS-CoV-2 never show any symptoms, and the virus predominantly causes respiratory sickness ranging from moderate disease to severe disease and death[59]. It shows that many of the traders have the basic knowledge of coronavirus infection. Although, people have the knowledge, some do not follow the guidelines and there are others who do not believe in the rules. Hence, they seldom obey the law of social distancing and other restrictions resulting from the virus when it is avoidable. While deliberate non-adherence had a larger correlation with intention and anti-social psychological variables, non-adherence to all SD regulations had a stronger association with vulnerability to coronavirus infection and control over SD. It is advised that persons residing in high-risk settings, such as those who do so in multi-family homes, receive extra assistance when urged to stay at home, and that shared responsibility and public awareness be emphasized in public health messages[60].

To support this, in Abuja, a study carried among residents of Gwagwalada Area Council, majority of the respondents were knowledgeable about the virus; mode of

transmission and its symptoms. Many (41.4%) knew it was a viral infection, there are few (1.9%) who still feel it was propaganda by politicians. Many were aware the period of incubation is 14days and those with an increased risk of contracting the virus are people with co-morbidities and those above 60 years[61]. In the same study, it is concluded that there was high awareness/knowledge about the transmission mode, the symptoms of the virus while there is no adequate knowledge on the infectiousness of an asymptomatic person.

In a study conducted among residents in Ibadan community, more people knew that they are liable to contract coronavirus infection while 12% feel coronavirus is exaggerated[62]. There are individuals who believe that the virus does not exist, others conclude that it exists but the politicians are using the outbreak as a means of enriching themselves. This study clearly shows that largely Nigerians have heard of the virus, however, there is still the percentage of people who have inadequate knowledge about the coronavirus infection. In regards to the vaccine, an assessment of the knowledge of COVID-19 vaccine among traders in Edaiken market, Uselu in Nigeria shows that 22.5% of the respondents had poor knowledge about the vaccine and they do not know where to get it[63]. Despite the general well spread information about the coronavirus infection among traders in parts of Nigeria, the knowledge about the COVID-19 vaccine was poor.

2.3.2 Attitude of Market Traders towards Coronavirus Infection

Studies were done to assess attitudes toward coronavirus infection in different countries worldwide. Generally, a large number of these studies showed a positive attitude regarding coronavirus infection as it relates to the various countries. Some of the findings of each study are briefly discussed below. A study was conducted sin Cairo, Alexandria, Beni-Suef and Suez Canal, all in Egypt, among 559 participants and they established that the majority of them had a positive attitude towards the different items

which made up the preventive measures of coronavirus infection[64]. Another study conducted among 1004 participants in Punjab, Sindh, Baluchistan, KP, Gilgit Baltistan and Azad Jammu Kashmir region of Pakistan, 93.0%, 57.1%, and 42.9% showed a positive attitude toward the requirement of masks and hand sanitizers, treatment facilities, and vaccination campaigns respectively[65].

In a similar survey in Saudi Arabia, 3,388 participants revealed that the participants' high knowledge of coronavirus infection translates into good and safe practices, during the coronavirus infection pandemic, which suggests that the practice of Saudi residents are very cautious. Almost 95% of respondents refrained from attending social events, 94% avoided crowded places, and 88% avoided shaking hands[66]. A study done among 404 chronic disease patients in Addis Zemen Hospital, Ethiopia revealed that 36.1% of them perceived that they had a moderate risk of infection with COVID-19. 28.7% of them reported that they undertook high care to prevent it, 52.54% of them reported that being infected with the virus was highly threatening for chronic disease patients, and 51.7% of them perceived that practicing physical distancing is very difficult[67]. In the same vein, a research among 552 workers in three hospitals in Ho Chi Minh City, China concluded that an amount of insufficient knowledge and negative attitude regarding coronavirus infection, which may be barriers to good prevention practice among chronic ill patients[68].

A study conducted evaluated knowlegde, attitude and practisces (KAP) towards coronavirus infection among university students in Japan. This was carried out between May 22 and July 16, 2020, using an online questionnaires. It further investigated the associated determining KAP factors[69]. Among the eligible respondents, 52.8% were female, 79.0% were undergraduate students, and 32.9% were students with their major university subjects being biology-related. 35.4% were from the capital region, and 83.7%

were Japanese. The discovery was that the overall KAP of university students in Japan was high. All respondents (100%) showed they possessed knowledge on avoiding enclosed spaces, crowded areas, and intimate situations. Most respondents showed a moderate or higher frequency of washing their hands or wearing masks (both at 96.4%) [70]. All reports were not positive as the study conducted among 2045 participants in Bangladesh showed that the participant's attitude regarding coronavirus infection was unimpressive[71].

In Africa, the research done among 136 healthcare workers in at Makerere University Teaching Hospitals, Uganda showed that 21% of them had a positive attitude towards coronavirus infection. Research carried out among the participants revealed that 79.5% of them had a positive attitude by their adherence to government's infection prevention and control measures. 92.7%, 96.4%, and 82.3% of them practiced social distancing/self-isolation, improved personal hygiene, and the use of a face mask, respectively. In a study conducted among Edaiken Major Market Traders in Benin where 74% were females, only 20.8% had a positive attitude towards the COVID-19 vaccine and another 22.5% had no idea where to get the vaccines[72]. The conclusion of this study on Major Market Traders in Edo State, many of them displayed a negative attitude towards the vaccine. Another study conducted by May 2021, the use of masks among traders in Lagos markets was high as 93% were reported to wear masks, and hand sanitization was okay[73]. Because of the difficulties traders faced during the height of the pandemic, they increased their prices and many decided to use the social media (80%) to sell online (48%) compared to the 62% and 11% that does that in the past.

Coronavirus infection outbreak has resulted in an increase in orders, supply chain disruptions, changes in consumer behaviour, shop closures, and other effects that will surely have an impact on online commerce forms of business. The coronavirus infection

epidemic has a substantial effect on mobile commerce, customer experience, and digitalization. Online sales and the number of customers utilizing wireless internet-enabled devices have grown significantly since the start of the coronavirus infection epidemic[74]. The traders' embraced technologies to enable their business thrive.

A study conducted in Abuja, only 50.6% of respondents showed fear of running out of masks and sanitizers, and the negative attitude of people towards following the rules to prevent the virus. The significant fatality rate and widespread occurrence of the coronavirus infection in 2019 are particularly concerning. This study's goal was to evaluate how well-informed, how this condition is seen, and how it affects both urban and rural people in Abuja, Nigeria. Coronavirus infection awareness, understanding of the method of transmission, and ability to avoid the disease were all high and substantially correlated with educational attainment and place of residence. Effective combat against coronavirus infection requires dispelling rumours[75].

There is a significant need to understand the diversity recorded in the biological, policy, social, and infrastructure responses during an epidemic to enable choices at all levels since the coronavirus pandemic contains an unprecedented degree of uncertainty and variability. The most practical methods for testing and diagnostics, contact tracing, and quarantine need to be enhanced due to the enormous asymptomatic spread of the virus and lack of a quick vaccine and medications. Infected individuals might not be quarantined because of the high likelihood of false negative test results. Instead, they would not be registered in contact-trace systems. Similarly, without widespread testing, asymptomatic individuals are not located and placed under quarantine.

To maximize solutions for mitigations for decision support during a pandemic, interconnected system dynamics models can be employed. The systems dynamics

epidemiology model and other interconnected system models in public health, such as intensive care units, hospitals, masks, contact tracing, social distancing, and a newly developed testing and diagnostics model, were used to analyse testing uncertainty and improve methods for identifying and diagnosing infected individuals. Additionally, a study was conducted on 54 simulations for each of two scenarios of 10% and 30% asymptomatic persons using an orthogonal array Latin Hypercube experimental design, adjusting key testing and social distancing inputs. Rapid and quantifiable findings for decision assistance may be obtained by combining systems dynamics modelling, computer experimental design, and statistical analysis. Our findings demonstrated that, the coronavirus infection may be stopped by identifying asymptomatic individuals in the public through mass testing, contact tracing, and quarantine. At the peak of the pandemic, 80.6% of people who were sick did not seek medical help because of fear of contacting the virus or being labelled a carrier of the disease[76].

In order to support choices at all levels, it is crucial to understand the variety recorded in the biological, policy, social, and infrastructural responses throughout an epidemic. The coronavirus infection pandemic has an unparalleled degree of uncertainty and variability. The most practical approaches for testing and diagnostics, contact tracing, and quarantine need to be refined given the enormous asymptomatic spread of the virus and the lack of a rapid vaccine and medications. Since of the high likelihood of false negative test results, sick individuals might not be quarantined since they would not be included in contact-trace systems.

Similar to this, asymptomatic individuals cannot be located and isolated without widespread testing. Models of interconnected system dynamics can be utilized to optimize mitigation methods for pandemic decision support. To investigate the testing uncertainties and to optimize methods for identifying and diagnosing infected individuals,

we use a systems dynamics epidemiology model in conjunction with other interconnected system models from the field of public health, such as hospitals, intensive care units, masks, contact tracing, social distancing, and a recently developed testing and diagnostics model. We conducted 54 simulations for each of two situations of 10% and 30% asymptomatic persons using an orthogonal array Latin Hypercube experimental design, altering key inputs for testing and social distance. Systems dynamics modeling can quickly and quantitatively produce data for decision assistance when combined with computer experimental design and statistical analysis. Our findings demonstrate that by identifying asymptomatic individuals in the public, broad testing, contact tracing, and quarantine can stop the coronavirus infection.

2.3.3 Preventive Practices of Coronavirus Infection among Market Traders

The concept of preventive practices has improved over time. Preventive practices means attitudes or activities aimed at inhibiting the development of a pathological state. Preventive practices include all processes that limit the progression of infection or an infection at any stage of its course or cycle[77]. An infectious disease is any ailment brought on by a virus or its toxic byproduct and spread to a vulnerable host through contact with an infected human, animal, or inanimate object. The enormous global burden of sickness brought on by infectious diseases has a negative influence on economies and public health systems all over the world, particularly those that serve vulnerable people. Understanding the elements affecting transmission in great detail is essential for controlling and preventing infectious diseases. This article highlights many of the agent, host, and environmental factors of infectious illnesses that are particularly important to public health practitioners while also summarizing some of the fundamental principles of infectious disease transmission.

A research conducted among 1767 participants in Saudi Arabia, showed 81% of them maintained an adequate practice regarding coronavirus infection[78]. The main way that coronavirus infection spreads is by direct contact with the virus, either through an infected person's coughing or sneezing or from surfaces that have been exposed to the virus. The World Health Organization (WHO) declared coronavirus infection a pandemic on March 12, 2020. One of the first nations in the world to take prompt and significant measures was the Saudi Arabian government. The public has been made aware of the viral transmission patterns and the value of quarantine and curfew by the Ministry of Health (MOH).

The most crucial component in controlling the spread of illnesses, despite stringent safeguards, is people's understanding of contagious viruses[78]. With relation to coronavirus infection, 81% of participants demonstrated a sufficient degree of practice, 95% had a high attitude, and 58% shown a moderate level of awareness. Both awareness-attitude ($r = 0.132$, p-value 0.001) and attitude-practice ($r = 0.149$, p-value 0.001) showed a strong positive connection. The only factor that all participants shared that was strongly linked to both awareness and practice was gender. Male participants in this study had a marginally higher degree of awareness (60%) compared to female participants (57%), however when it came to practice for the coronavirus infection, female individuals showed somewhat greater practice (82%) than male participants (80%).

The Ministry of Health (MOH) and the World Health Organization (WHO) served as the primary information sources. Despite the little public knowledge, they had a superior mindset and practice. To be ready for epidemic and pandemic scenarios, public awareness must be raised. To raise awareness and achieve a suitable level of understanding, a comprehensive public health education program is essential[78].

Another study among 4850 residents in Malaysia revealed that 83.4% of them took precautions such as avoiding crowds[79]. Many nations have issued severe lockdown, movement control, or shelter in place orders to their citizens in an effort to contain the coronavirus infection epidemic. The collaboration and adherence of every member of society are essential for the efficiency of these mitigating measures. The degree to which a society is willing to embrace behavioural change initiatives from health authorities is directly related to the information, attitudes, and behaviours that individuals have towards the condition. The purpose of this study was to evaluate the public's understanding, attitudes, and behaviours regarding coronavirus infection in Malaysia. Between March 27 and April 3, 2020, 4,850 Malaysian citizens participated in an online cross-sectional survey.

The survey instrument, which was adapted from a previously published questionnaire on coronavirus infection, included demographic information, 13 knowledge-related items, 3 attitude-related items, and 3 practice-related items. A one-way analysis of variance (ANOVA), descriptive statistics, chi-square tests, t tests, and other tests were performed[79]. The knowledge test's overall accuracy percentage was 80.5%. The majority of participants had favorable opinions of Malaysia's abilities to manage the illness (95.9%), the effective coronavirus infection containment (83.1%), and the Malaysian government's handling of the issue (89.9%). In the week before to the commencement of the movement control order, the majority of individuals were also taking measures, including avoiding crowded areas (83.4%) and practicing good hand cleanliness (87.8%). However, fewer people (51.2%) were seen using face masks.

The knowledge, attitudes, and practices in Malaysia in response to the coronavirus infection epidemic are being evaluated for the first time through this survey. The findings emphasize the necessity for specialized health education initiatives to raise

levels of knowledge, attitudes, and behaviours as well as the need of consistent message from health authorities and the government. In the week before there was an order restricting movement, 87.8% of them practiced proper hand hygiene, while the wearing of face masks was less common, - at 51.2% of them[79].

A study was conducted among 2090 respondents in the Philippines, 89.9% of them applied hand washing as a preventive practice to coronavirus infection [80]. Due to the fragile health systems and widespread deception, the presence of coronavirus infection in low- and middle-income countries (LMICs) is causing serious concerns about pandemic preparedness and response. This study's goal was to learn how households in the Philippines that were living in extreme poverty viewed coronavirus infection. In order to effectively combat coronavirus infection in low-income settings, it was determined that targeted health education was required. It was also noted that contextual relevance was crucial for successful strategies. The development of specialized guidance for public health response and communication strategies for LMIC will require an understanding of KAPs among populations experiencing extreme poverty. 2224 people in all, representing 166 localities in rural, urban, and coastal environments, answered the poll.

Despite the fact that the poll was conducted at the beginning of the pandemic, 94.0% of participants had heard about coronavirus infection. Conventional media outlets including radio (56.1%) and television (85.5%) were cited as the primary information sources about the virus. 89.5% of respondents recognized coughing and sneezing as a transmission channel, but only 72.6% of respondents recognized indirect hand contact as a transmission method. Hand washing was mentioned as a preventative method against the virus by 82.2% of respondents, whereas social withdrawal and avoiding crowds were only mentioned by 32.4% and 40.6% of respondents, respectively. According to COVID-

19 responses, 89.9% of respondents said they wash their hands frequently. Those who were more knowledgeable about potential transmission channels took more precautionary actions[81].

From another research conducted among 589 participants in north-central Nigeria including, Benue, Niger, Kogi, Kwara, Nasarawa, Plateau and the Federal Capital Territory (FCT), 90.2% of them indicated social distancing or crowd avoidance and 78.8% of them indicated they avoided reported handshaking. 74.4% reported they avoided face kissing as some of the practice to reduce community spread of coronavirus infection [82]. In a study among 400 participants in Tanzania, the majority (77%) of them reported they had not visited any crowded place, and 80.0% of them wore masks when going out. 98% of them identified correctly that coronavirus infection can be transmitted by respiratory droplets and while other factors as chronic illnesses and obesity can complicate issues[83]. From another study done in Greece, it was only 24.9% of healthcare professionals that reported washing their hands before and after they had contact with the patient/patient's environment[84].

Factors that significantly associated with poor practice included marital status of unmarried, educational status, and inability to read and write. Other was rural residence, monthly income of less than a mean and poor knowledge. According to another research conducted among 2017 respondents in Bangladesh, factors that were significantly associated with the more frequent prevention practice include female sex, older age, higher education, and monthly income (>30,000 BDT). Others were urban residency and having more positive attitude. According to a study in Greece, the knowledge score had a significant association with practice score. This is an indication that individuals with a high knowledge score would most likely practice more preventive measures. Globally, the severe acute respiratory syndrome-CoV-2 pandemic has grown.

The current study's objective is to look at the coronavirus infection knowledge, attitudes, and behaviours (KAP) of Greek healthcare workers. Methods: 500 healthcare professionals were contacted between February 10 and February 25, 2020. An in-depth interview questionnaire was used to gauge participants' knowledge, attitudes, and practice about coronavirus infection. For knowledge, one point was awarded for each right response; attitudes, or worries about preventing coronavirus infection, and practice, or actions taken to carry out preventative measures, received one point each. A score was determined for each category based on the sum of the points. Results: A total of 461 health care professionals (mean age SD: 44.2 10.78 years, 74% females) submitted the questionnaire and were counted in the study.

The most common occupation was nursing (47.5%), next doctors (30.5%), and paramedics (19%). 88.28% of the subjects possessed a high degree of expertise (knowledge score equal to 4, or more). 71% of participants supported the prohibition on temporary travel restrictions. A potential coronavirus infection vaccine's absorption was predicted to be 43%. Indicating that respondents with a high knowledge score had a more favourable impression of preventative measures and would use them more frequently, knowledge score was substantially linked with both attitudes score ($p = 0.011$) and practice score (p 0.001). Subjects with higher attitudes scores are more likely to engage in behaviours that contribute to the prevention of coronavirus infection transmission, according to a significant relationship between attitudes and behaviours ($p = 0.009$).

In conclusion, Greek healthcare professionals have a high degree of awareness of coronalvirus infection pandemic, which is strongly correlated with their attitudes and behaviours toward preventative health measures. The successful control of the pandemic in Greece may have been greatly influenced by the high degree of coronavirus infection understanding among medical personnel. Future proactive vaccination education efforts

may place a high priority on targeted educational initiatives meant to boost the number of healthcare professionals who are willing to receive a prospective coronavirus infection vaccine.[85]

In addition, results from another study indicated that knowledge directly affected both attitudes and practice. Efficacy belief was the most influential and significant practice factor among the influencing factors of coronavirus infection preventive behaviours. The belief mediated the relationship between knowledge and all the three preventive behaviours of wearing facial masks, practicing hand hygiene, and avoiding crowded places. The level of people's knowledge varied by socio-demographic characteristics. Coronavirus infection 2019 is an acute respiratory illness brought on by the severe acute respiratory syndrome coronavirus-2 (COVID-19). Transmission of a virus can happen via infected surfaces, droplets in the air, or direct contact.

The global health organization (WHO) and the Saudi Ministry of Health (MOH) have recommended the public to take preventive measures to minimize transmission of the virus and lower incidence of infection in an effort to successfully contain the coronavirus infection epidemic. These precautions including hand washing, the wearing of masks and gloves, and refraining from contacting one's face with dirty hands. The current study sought to find out if Saudi citizens were aware of and followed these preventative measures during the epidemic.

To assess public understanding of coronavirus infection, a cross-sectional online self-reported survey of 5105 Saudi citizens was carried out between March 25 and April 17, 2020, after calculating the necessary sample size using power analysis. All of the participants were Saudi Arabian citizens who were 18 years of age or older and Arabic speakers. The knowledge and adherence of the participants to precautionary measures were taken into account while calculating scores. A high degree of awareness (score of

2/2) and practice (score of > 3/6) about hand hygiene and donning gloves and masks was demonstrated by around 90% of participants. Practicing scores were favourably related to females and high-income persons. Youth and inhabitants of the Kingdom's northern and western areas were associated with lower practice scores.

The frequency and effectiveness of hand washing increased during the pandemic for more than half of individuals, who preferred hand washing over alcohol disinfection. The overall, results showed that personal preventive measures were followed and that there was a high level of public awareness of coronavirus infection transmission channels. To enhance general practice, however, public awareness efforts are necessary, with a focus on young people and people with low levels of education and money. Females and individuals with higher levels of education demonstrated higher levels of knowledge of coronavirus infection[86]. The coronavirus infection pandemic has been linked to several beliefs and behaviours. In this study, we examined how inhabitants of a few urban neighborhoods in Ibadan, Oyo State, Nigeria, felt and behaved toward the coronavirus infection.

The two most commonly mentioned actions taken by respondents after the onset of coronavirus symptoms were going to the hospital (95%) and phoning the coronavirus infection assistance line (58.3%). In addition, 89 (26%) understood they could get coronavirus infection, but 41 (12%) thought it was a fictitious event. The two consequences that respondents most usually mentioned were academic delay (8.8%) and hunger/low income (48.8%). The most often reported preventive measures were the use of face masks (64.5%) and social isolation (48%). Just 71 people (20.8%) showed good hand washing techniques. A modest connection of 0.239 (p 0.001) existed between the impression of the chance of contracting the infection and the prevention strategies. The procedures for preventing coronavirus infection have flaws. Improved hand washing,

face mask usage, and other coronavirus infection prevention techniques are required. There were implications for public health communication and policies[87].

In several nations, wearing a face mask is required in an effort to slow the spread of coronavirus infection. In this cross-sectional study, we sought to understand how 1173 young Poles used face masks during the second wave of the coronavirus infection pandemic in October 2020. The majority of respondents (97.4%) stated that they always wore face masks when it was required. Cloth masks (47.7%) and surgical masks (47%), followed by N95/FFP3 respirators (3.2%) and half-face elastomeric respirators (0.9%), were the most frequently used face mask kinds. More over 38% of people, mostly women, said they routinely cleaned their face masks. Less frequently than other respondents, those who reported having sensitive skin or a personal propensity for atopic dermatitis (64.5% vs. 72.1%; $p = 0.02$) or atopic dermatitis (65.5% vs. 74.3%; $p = 0.005$) reported using many face masks.

Those who had lesions on their facial skin reported using disinfecting face masks more frequently (40.8% vs. 34.9%; $p = 0.04$). Overall, compared to our previous survey, the self-declared use of face masks among young people in Poland has increased since the start of the outbreak. Use of face masks will continue to be an effective strategy for reducing the spread of coronavirus infection until widespread immunization of the populace and changes in governmental policy are made[88]. Many people avoid washing their hands even when their actions call for it. The majority of hand washing research conducted to date has been conducted in busy places like airports and other tourist destinations. Several investigations have shown a gender difference in hand washing compliance as well as a continuous deficit.

The study described in this article replicates and expands earlier work while identifying potential environmental and demographic predictors of hand washing

compliance through field observations of 3,749 individuals in a college town setting. Furthermore, according to the authors' study, adequate hand washing techniques that the Centres for Disease Control and Prevention advise against using are not being used. The study by the authors suggests that compliance rates are exaggerated and calls into doubt the reliability of past assessments of "appropriate" hand washing procedures. The findings may encourage more people to wash their hands, lowering the likelihood that they may contract a disease.[89]

The study concludes that there is a strong need to improve the preventive practice of contracting coronavirus. Hand washing was found to be higher in females and in people who are at greater risk of contracting the virus.In a study conducted in Nigeria, it is reported that some people felt the preventive measures are unnecessary and will not work. In many of the responses by the same study, it is observed that most people are favourably disposed towards hand washing as a preventive measure. From that study, statements of people interviewed showed that some do not believe the virus existed, and this places a limitation on them observing the preventive measures. Also, some of the people believed that the measures cannot work in their locality, especially social distancing as they wondered how people will not interact closely anymore.[90] In the South Region of Nigeria, only 39% of the respondents washed the critical parts of their hands correctly[91]. Wrong knowledge about the virus, the denial of its existence, and illiteracy can affect the preventive measures of people against coronavirus infection.

2.4 Conceptual Model

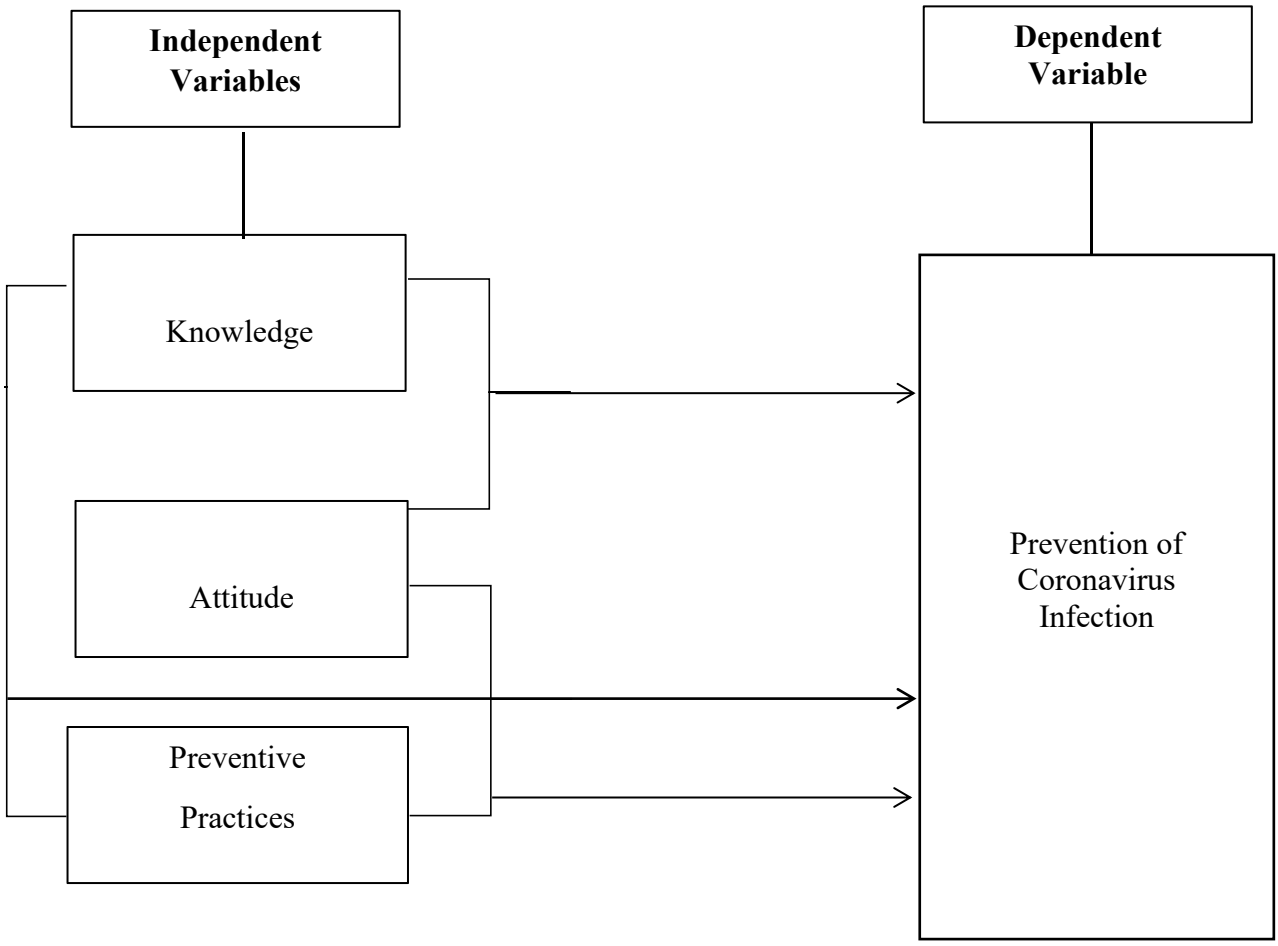

Fig. 2.1: Conceptual Model on Knowledge, Attitude and Preventive Practices towards Curtailing Coronavirus Infection.

The figure 2.4.1 shows the conceptual model for the study. The figure shows conceptual model between knowledge, attutide and preventive practices which are the independent variables. The indicators of the independent variables are knowledge of origin and symptoms of the infection, avoiding crowded areas, washing of hands with soap and water, and use of face mask as positive attitude towards the infection and practice of personal hygiene and vaccination as the preventive practices. The dependent variable is prevention of coronavirus infection. The indicators of the infection are fever, cough, sore throat and difficulty in breathing which may lead to death. The indicators reflect the

relationship that exist between Knowledge, Attitude and Preventive Practices towards curtailing Coronavirus Infection.

Source: Researcher-Developed, 2023

2.5 Summary of Gaps in Literature Reviewed

Despite the many studies conducted on Coronavirus diseases among different groups, studies on the knowledge, attitude and preventive practices towards prevention of coronavirus among Major market traders is not sufficient. No specific literature has been identified on studies related to market traders in any of the Local governments in Ogbomoso. This is why this study aim at assessing the knowledge, attitude and preventive practices towards prevention of coronavirus infection among Market Traders in Ogbomoso North Local Government Area, Oyo State.

Brief History of Ogbomoso North Local Government

Ogbomoso is a cosmopolitan town in Oyo State with four distinct Local Governments which are Ogbomoso South, Ogbomoso North, Surulere, and Orire Local Government. Ogbomoso North Local Government towns and villages include Ogunsowo, Akankan, Kinnira, Apatere and Sagbe.The Ogbomoso North Local Government with administrative headquarters at Kinnira was etched out from the Old Ogbomoso Local Council on September 27th, 1991[92]. The Local Government council was established on 1st of April, 1973. The position of the local government is strategic such that it is a link to the Northern part of the country. The local government is bounded by Ogbomoso South, Surulere Local Government to the East, and Orire Local Government to the East. Its total land mass is 207,978 square Kilometres, and the total estimated population is put at 225, 408[93]. The prevalent religions are Christianity and Islam. Those who are from the Local Government Area are known for farming. They are a multi-ethnic population but the Yoruba have the greatest number.

The local government can be described as an urban settlement with the availability of various investments such as international Standard hotels, financial institutions, Hospitals and Ladoke Akintola University of Technology (LAUTECH). There are number tourist attractions at the local government such as Soun's Palace, Ladoke Akintola building, Ogunlola Site, and gulf course. The Local Government Area has viable trade sector and hosts several Markets, including Waso Market Phase I, Waso Market Phase II, Ayanyan Cattle Market, Butcher Market, Agbada Market, Food Stuff market, Oja Jagun and Oja-Oba markets, where a wide variety of commodities are bought and sold. The average population of each market ranges between 52 and 500 in number.

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Chapter Three

Methodology

This chapter focused on methodology. The following are the sub-headings for this chapter:

3.1. Research Design

3.2 Population of the Study

3.3 Sample and Sampling Techniques

3.4 Description of Research Instruments

3.5 Validity of Research Instrument

3.6 Reliability of Research Instrument

3.7 Data Collection

3.8 Data Analysis

Endnotes

3.1 Research Design

This research adopted descriptive survey research design. Information collected on assessment of knowledge, attitude and preventive practices towards prevention of coronavirus infection from the population sample was used to generalize on the entire population (Market Traders).

3.2 Population of the Study

Population of this study comprised all market traders in all the eight (8) markets of Ogbomoso North Local Government Area of Oyo State[1]. The markets include Butcher Market, Food Stuff Market, Ayanyan Market, Waso Market Phase I, Waso Market Phase II, Oja Jagun Market, Agbada Market, and Oja-Oba Market. The names and location of the markets are listed in the table 3.1

Table 3.1: Table Showing the Population of market traders

S/N	Name of Markets	Location	Average Population
1.	Waso Market, Phase I	Ilorin Express Road	340
2.	Ayanyan Market	Ilorin Express Road	500
3.	Food Stuff Market	Oja Igbo	228
4.	Butcher Market	Oja Titun	132
5.	Waso Market, Phase 11	Sabo Area	100
6.	Oja Jagun	Opposite Soun palace	40
7.	Agbada Market	Oja Titun	116
8.	Oja-Oba	Behind Onpetu palace	80
	TOTAL		**1536**

Source: Field Survey from market leaders, 2022

3.3 Sample and Sampling Techniques

The total sample used for this study was three hundred (300) market traders. Multistage sampling procedures were employed for this study.

The first stage: Simple random sampling technique of fish bowl without replacement was used to select four out of eight markets in Ogbomoso North Local Government Area of Oyo State.

The second stage: Proportionate sampling technique was used to select twenty five percent (25%) from the selected markets.

The Third stage: Convinience sampling technique was used to administer questionnaire to those respondents who volunteered themselves from the markets selected. The

markets are Buchers Market, Food stuff Market, Ayanyan Market and Waso Market Phase 1. The names and location of the markets are listed in the table 3.2.

Table 3.2: Table Showing the Sample Population for the Study

S/N	Name of Market	Location	Average Population	Sample Population 25%
1.	Waso Market, Phase I	Ilorin Express Road	340	85
2.	Ayanyan Market	Ilorin Express Road	500	125
3.	Food stuff market	Oja'Ogbo	228	57
4.	Butcher Market	Oja Titun	132	33
	TOTAL		**1200**	**300**

Source: Field Survey from market leaders, 2022

3.4 Description of the Research Instrument

A researcher-developed Questionnaire on Assessment of Knowledge, Attitude and Preventive Practices towards Curtailing Coronavirus Infection (QKAPPCI) was used as an instrument for data collection in the study. This instrument was a closed ended Likert scale. The questionnaire was made up of four sections, namely; sections A, B, C and D.

Section A: Socio- Demographic Information: This was used to obtain information on socio-demographic characteristics of the respondents. Four items were generated and responded to by the respondents. The items included age, sex, educational qualification, and name of markets.

Section B: Knowledge of Coronavirus Infection Scale (KCIS): This scale was used to gather information from respondents on knowledge of coronavirus infection. Each response was scored on Yes or No.

Section C: Attitudes Toward Coronavirus Infection Scale (ATCIS): This scale was used to gather information from the respondents on attitudes toward coronavirus infection.

Each response were scored on Likert scale format of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

Section D: Preventive Practice toward Coronavirus infection Scale (PPCIS): This scale was used to gather information from respondents on preventive practice toward coronavirus infection. Each response was scored on Likert scale format of Regularly (RE), Sometimes (SM) and Never (NE).

3.5 Validity of Research Instrument

Validity of research instrument describes the method adopted in ensuring the instrument used has measured what it was designed to measure[2]. In ensuring validity of the instrument, a draft of the questionnaire was presented to the researcher's supervisor and other lecturers in the Department of Kinesiology, Sports Science and Health Education, Lead City University, Ibadan, to ensure construct and content validity of the instrument. Necessary corrections were effected before the administration of the instrument in order to improve quality of the questionnaire.

3.6 Reliability of the Research Instrument

This indicates the extent to which the research instrument is without bias (error free) and hence, ensures consistent measurement across time and across the various items in the instrument[3]. In ensuring this, the validated instrument was given to twenty (20) Market traders in Agbada market in Ogbomoso North Local Government Area who were not part of the respondents, but possess similar characteristics with the actual respondents. Cronbach alpha technique was used to determine the coefficient of the reliability. The internal consistency of the instrument yielded 0.84. This result indicated that the instrument was reliable for the study.

3.7 Method of Data Collection

The researcher provided research instrument in English and Yoruba Languages, with the assistance of an expert in translating the English version of the questionnaire to Yoruba version. The questionaires were translated to Yoruba by two experts. The sample of the instrument in Yoruba Language was for clear understanding of the respondents who cannot respond in English Language. Furthermore, five (5) Research Assistants was recruited, trained and engaged in the course of carrying out the study. The researcher explained the purpose and ways of administering the instruments to the five research assistants who assisted in administering the instrument and some were filled out.

3.8 Method of Data Analysis

The completed copies of the questionnaire were collected; coded and analysed using descriptive statistics of frequency counts and percentages to analyse the socio-demographic characteristics of the respondents and the research questions. Inferential statistics of Pearson Product Movement Correlation (PPMC) was used to analyse hypotheses 1, 2 and 3. All the hypotheses were tested at 0.05 level of significance.

Endnotes

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Chapter Four

Results and Discussion of Findings

This chapter presents results of the analyses and discussion of findings. The results and discussion of findings are presented based on demographic characteristics of the respondents, research questions and hypotheses as follow:

4.1 Demographic Data Analysis

The following are the socio-demographic characteristics of the respondents.

Table 4.1: Distribution of the Respondents by Sex

Sex	Frequency	Percent
Male	114	38.0
Female	186	62.0
Total	300	100.0

Source: Field Survey, 2023

Table 4.1 reveals that 114 (38.0%) respondents were male, while 186 (62.0%) were female. This means that, most of the respondents were female.

Table 4.2: Distribution of the Respondents by Age

Age	Frequency	Percent
18-24 years	21	7.0
25-31 years	76	25.3
32-38 years	113	37.7
39 years and above	90	30.0
Total	300	100.0

Source: Field Survey, 2023

Table 4.2 reveals that 21 (7.0%) respondents were in the age range of 18-24 years, 76 (25.3%) were between 25-31 years, 113 (37.7%) were in the age range of 32-38 years, while 90 (30.0%) respondents were 39 years and above. This means that, most of the respondents were between 32-38 years.

Table 4.3: Distribution of the Respondents by Educational Qualification

Educational Qualification	Frequency	Percent
No formal education	16	5.3
Primary education	93	31.0
Secondary education	123	41.0
Tertiary education	68	22.7
Total	300	100.0

Source: Field Survey, 2023

Table 4.3 reveals that, 16 (5.3%) respondents had no formal education, 93 (31.0) obtained primary education, 123 (41.0%) had secondary education, while 68 (22.7%) possessed tertiary education. This means that, most of the respondents had secondary education.

Table 4.4: Distribution of the Respondents by Market

Market	Frequency	Percent
Ayanyan Market	126	42.0
Bucher Market	35	11.7
Ojagbo	54	18.0
Waso Market Phrase	85	28.3
Total	300	100.0

Source: Field Survey, 2023

Table 4.4 reveals that, 126 (42.0%) respondents were sampled from Ayanyan Market, 35 (11.7%) were from Bucher Market, 54 (18.0%) were from Ojagbo, while 85 (28.3%) were sampled from Waso Market. This means that, most of the respondents were sampled from Ayanyan Market.

4.2 Presentation of Data

4.2.1 Research Questions

The following research questions were raised and answered:

Research Question One: What is the level of knowledge of the traders on coronavirus infection among market traders in Ogbomoso North Local Government Area?

Table 4.5: Summary of Result on the Knowledge of Traders on Coronavirus Infection

S/n	Statement	Yes	No	Mean	Std. Dev.
1.	Coronavirus infection originated from Whuhan in China	285 (95.0%)	15 (5.0%)	1.95	0.22
2.	Dry cough, sore throat, and fever are some symptoms of coronavirus infection	296 (98.7%)	4 (1.3%)	1.99	0.12
3.	Coronavirus infection could be transmitted via infected respiratory droplets and surfaces.	296 (98.7%)	4 (1.3%)	1.99	0.12
4.	Coronavirus infection can be contracted through inhalation of short distance droplet and direct contact.	295 (98.3%)	5 (1.7%)	1.98	0.13
5.	Coronavirus infection may lead to damage of body organs and death.	296 (98.7%)	4 (1.3%)	1.99	0.12
6.	Vaccination is a measure to prevent the spread of coronavirus infection.	298 (99.3%)	2 (0.7%)	1.99	0.08
7.	Suspected individuals with corona virus infection should be isolated for 14 days.	292 (97.3%)	8 (2.7%)	1.97	0.16
8.	Not showing signs of coronavirus infection do not mean one cannot have it.	241 (80.3%)	59 (19.7%)	1.80	0.40
9.	Frequent washing of hands with soap and clean water and wearing of nose mask will help reduce the spread of coronavirus infection.	294 (98.0%)	6 (2.0%)	1.98	0.14
				Weighted mean=1.96	

Source: Field Survey, 2023
Decision Rule: <0.49=Low; 1.50–1.99=High; Above 2.00=Very High

As indicated in table 4.5, 285 (95.0%) respondents affirmed that coronavirus infection originated from Whuhan in China, while 15 (5.0%) indicated no. In addition, 296 (98.7%) respondents confirmed that dry cough, sore throat, and fever are some symptoms of coronavirus infection, while 4 (1.3%) indicated no. Besides, 296 (98.7%) respondents established that coronavirus infection could be transmitted via infected

respiratory droplets and surfaces, while 4 (1.3%) indicated no. Moreover, 295 (98.3%) respondents stated that Coronavirus infection can be contracted through inhalation of short distance droplet and direct contact, while 5 (1.7%) indicated no. Moreover, 296 (98.7%) respondents stated that coronavirus infection may lead to damage of body organs and death, while 4 (1.3%) indicated no.

Furthermore, 298 (99.3%) respondents affirmed that vaccination is a measure to prevent the spread of coronavirus infection, while 2 (0.7%) indicated no. Likewise, 292 (97.3%) respondents confirmed that suspected individuals with corona virus infection should be isolated for 14 days, while 8 (2.7%) indicated no. Furthermore, 241 (80.3%) respondents affirmed that not showing signs of coronavirus infection do not mean one cannot have it, while 59 (19.7%) indicated no. Also, 294 (98.0%) respondents affirmed that frequent washing of hands with soap and clean water and wearing of nose mask would help reduce the spread of coronavirus infection, while 6 (2.0%) indicated no. Based on the responses, it was revealed that most respondents responded positively to the question items. Table 4.5 further revealed that the weighted mean was 1.96 which indicated that the score was high based on the decision rule. This means that the level of knowledge of the traders on coronavirus infection among market traders in Ogbomoso North Local Government Area was high.

Research Question Two: What are the traders' attitudes towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area?

Table 4.6: Summary of Result on Traders' Attitudes towards Curtailing Coronavirus Infection

S/n	Statement	SA	A	D	SD	Mean	Std. Dev.
1.	News about coronavirus infection does not bother me.	77 (25.7%)	175 (58.3%)	27 (9.0%)	21 (7.0%)	1.97	0.79
2.	Those who are infected with coronavirus infection are careless.	55 (18.3%)	146 (48.7%)	68 (22.7%)	31 (10.3%)	2.25	0.87
3.	Coronavirus infection is a disease of the rich and those who travel abroad.	27 (9.0%)	73 (24.3%)	156 (52.0%)	44 (14.7%)	2.72	0.82
4.	My trade does not allow me to observe coronavirus infection precautions.	14 (4.7%)	58 (19.3%)	155 (51.7%)	73 (24.3%)	2.96	0.79
5.	Observing the coronavirus safety precautions is a reflection of lack of faith in God.	30 (10.0%)	95 (31.7%)	123 (41.0%)	52 (17.3%)	2.66	0.88
6.	I hardly fall sick therefore I do not see any need to get vaccinated against coronavirus.	29 (9.7%)	71 (23.7%)	113 (37.7%)	87 (29.0%)	2.86	0.95
7.	Using face mask disturbs me.	49 (16.3%)	96 (32.0%)	143 (47.7%)	12 (4.0%)	2.39	0.81
8.	It is not convenient for me to always Wash my hands every time after attending to each customer.	36 (12.0%)	91 (30.3%)	136 (45.3%)	37 (12.3%)	2.58	0.86
9.	I'm disposed to using of herbs to fight against coronavirus disease.	15 (5.0%)	65 (21.7%)	99 (33.0%)	121 (40.3%)	3.09	0.90
10.	Coronavirus infection has less adverse health implication than the noise being made about it and being in less humidity region does not make the disease to thrive.	20 (6.7%)	73 (24.3%)	132 (44.0%)	75 (25.0%)	2.87	0.86
						Weighted mean=2.64	

Source: Field Survey, 2023
Decision Rule: *Highly positive=3.00-4.00, Positive=2.00-2.99, Negative=0.99-1.99, Highly negative= 0.00-0.01.*
Key: Strongly agree (SA): Agree (A): Disagree (D) and Strongly Disagree (SD)

Table 4.6 reveals that 77 (25.7%) respondents strongly agreed that news about coronavirus infection does not bother, 175 (58.3%) agreed, 27 (9.0%) disagreed, while 21 (7.0%) strongly disagreed. In addition, 55 (18.3%) respondents strongly agreed that those who are infected with coronavirus infection are careless, 146 (48.7%) agreed, 68 (22.7%) disagreed, while 31 (10.3%) strongly disagreed. In addition, 27 (9.0%) respondents strongly agreed that coronavirus is a disease of the rich and those who travel abroad, 73 (24.3%) agreed, 156 (52.0%) disagreed, while 44 (14.7%) strongly disagreed. Besides, 14 (4.7%) respondents strongly agreed that their trade does not allow me to observe coronavirus infection precautions, 58 (19.3%) agreed, 155 (51.7%) disagreed, while 73 (24.3%) strongly disagreed. Besides, 30 (10.0%) respondents strongly agreed that observing the coronavirus infection safety precautions is a reflection of lack of faith in God, 95 (31.7%) agreed, 123 (41.0%) disagreed, while 52 (17.3%) strongly disagreed.

In the same vein, 29 (9.7%) respondents strongly agreed that hardly fall sick therefore I do not see any need to get vaccinated against coronavirus infection, 71 (23.7%) agreed, 113 (37.7%) disagreed, while 87 (29.0%) strongly disagreed. Besides, 49 (16.3%) respondents strongly agreed that using face mask disturbs, 96 (32.0%) agreed, 143 (47.7%) disagreed, while 12 (4.0%) strongly disagreed. Additionally, 36 (12.0%) respondents strongly agreed that it is not convenient for me to always Wash my hands every time after attending to each customer, 91 (30.3%) agreed, 136 (45.3%) disagreed, while 37 (12.3%) strongly disagreed. Additionally, 15 (5.0%) respondents strongly agreed that they are disposed to using of herbs to fight against coronavirus disease, 65 (21.7%) agreed, 99 (33.3%) disagreed, while 121 (40.3%) strongly disagreed. Also, 20 (6.7%) respondents strongly agreed that coronavirus infection has less adverse health implication than the noise being made about it and being in less humidity region does not make the disease to thrive, 73 (24.3%) agreed, 132 (40.0%) disagreed, while 75 (25.0%)

strongly disagreed. Based on the responses, it was revealed that most respondents responded positively to the negatively developed question items. Table 4.6 further revealed that the weighted mean was 2.64 which indicated that the score was positive based on the decision rule. This means that the traders' attitude towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area was positive.

Research Question Three: What is the level of preventive practices of coronavirus infectionss among market traders in Ogbomoso North Local Government Area?

Table 4.7: Summary of Result on Preventive Practices of Coronavirus Infection

S/n	Statement	RE	SM	NE	Mean	Std. Dev.
1.	I use my hands or handkerchief to cover my mouth when coughing.	230 (76.7%)	55 (18.3%)	15 (5.0%)	2.72	0.55
2.	Staying in the sun to sell my goods is better for me than using face mask.	138 (46.0%)	85 (28.3%)	77 (25.7%)	2.20	0.82
3.	I believe in using herbs to prevent coronavirus infection.	164 (54.7%)	86 (28.7%)	50 (16.7%)	2.38	0.76
4.	I use face mask every time at the market.	189 (63.0%)	99 (33.0%)	12 (4.0%)	2.59	0.57
5.	I wash my hands with soap and clean water frequently at the market.	204 (68.0%)	90 (30.0%)	6 (2.0%)	2.66	0.52
6.	I make use of hand sanitizer after each sale.	198 (66.0%)	98 (32.7%)	4 (1.3%)	2.65	0.51
7.	Treating symptoms of fever is a common practice for me.	224 (74.7%)	66 (22.0%)	10 (3.3%)	2.71	0.52
8.	I maintain social distancing while in the crowd.	221 (73.7%)	70 (23.3%)	9 (3.0%)	2.71	0.52
9.	I will willfully isolate myself if I experience the symptoms of coronavirus infection as a way to prevent its spread.	158 (52.7%)	66 (22.0%)	76 (25.3%)	2.27	0.84
10.	Vaccination is a major way to prevent the spread of coronavirus infection.	240 (80.0%)	23 (7.7%)	37 (12.3%)	2.68	0.68
					Weighted mean=2.56	

Source: Field Survey, 2023
Decision Rule: Very high =3.00-4.00, High=2.00-2.99, Low=1=0.99-1.99, Very low=0.00-0.01.

Table 4.7 reveals that 230 (76.7%) respondents regularly use my hands or handkerchief to cover their mouth when coughing, 55 (18.3%) sometimes involved in it, while 15 (5.0%) never engaged in it. In addition, 138 (46.0%) respondents regularly stay in the sun to sell their goods is better for them than using face mask, 85 (28.3%) sometimes involved in it, while 77 (25.7%) never engaged in it. Moreover, 164 (54.7%) respondents regularly believe in using herbs to prevent coronavirus infection, 86 (28.7%) sometimes involved in it, while 50 (16.7%) never engaged in it. Additionally, 189 (63.0%) respondents regularly used face mask every time at the market, 99 (33.0%) sometimes involved in it, while 12 (4.0%) never engaged in it. Also, 204 (68.0%) respondents regularly wash their hands with soap and clean water frequently at the market, 90 (30.0%) sometimes involved in it, while 6 (2.0%) never engaged in it.

In the same vein, 198 (66.0%) respondents regularly make use of hand sanitizer after each sale, 98 (32.7%) sometimes involved in it, while 4 (1.3%) never engaged in it. Besides, 224 (74.7%) respondents agreed that regular of treating symptoms of fever is a common practice for them, 66 (22.7%) sometimes involved in it, while 10 (3.3%) never engaged in it. Moreover, 221 (73.7%) respondents agreed that they maintain social distancing while in the crowd, 70 (23.3%) sometimes involved in it, while 9 (3.0%) never engaged in it. Moreover, 158 (52.7%) respondents agreed that they willfully isolate themselves if they experience the symptoms of coronavirus infection as a way to prevent its spread, 66 (22.0%) sometimes involved in it, while 76 (25.3%) never engaged in it. Also, 240 (80.0%) respondents agreed that vaccination is a major way to prevent the spread of coronavirus infection, 23 (7.7%) sometimes involved in it, while 37 (12.3%) never engaged in it. Based on the responses, it was revealed that most respondents responded positively to the question items. Table 4.7 further revealed that the weighted mean was 2.56 which indicated that the score was high based on the decision rule. This

means that the preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area was high.

4.2.2 Hypotheses

The following hypotheses were tested in this study.

Hypothesis One: There is no significant relationship between knowledge and attitude towards prevention of coronavirus infection among market traders in Ogbomoso North Local Government Area.

Table 4.8: Summary of Analysis on Relationship between Knowledge and Attitude towards curtailing Coronavirus Infection

Variables	Mean	Std. Dev.	Knowledge	Attitude	N	Sig. (p value)	Remark
Knowledge	19.62	0.68	1	-0.026	300	0.655	Not Significant
Attitude	26.35	4.75	-0.026	1			

Correlation is Significant at 0.05 alpha level ($p<0.05$)

Source: Field Survey, 2023

Table 4.8 shows that knowledge was not tested significant on attitude towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area ($r=-0.026$, $p>0.05$). It was further established that knowledge had negative correlation with attitude towards prevention of coronavirus infection; while correlation coefficient's magnitude was weak. This implied that there was no significant relationship between knowledge and attitude towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area. The null hypothesis was therefore tenable. The negative relationship between knowledge and attitude implied that, knowledge of coronavirus infection among market traders in Ogbomoso North Local Government Area could not improve their attitude towards it.

Hypothesis Two: There is no significant relationship between knowledge and preventive practices of Coronavirus infection among market traders of Ogbomoso North Local Government Area.

Table 4.9: Summary of Analysis on Relationship between Knowledge and Preventive Practices of Coronavirus infection

Variables	Mean	Std. Dev.	Knowledge	Preventive Practices	N	Sig. (p value)	Remark
Knowledge	19.62	0.68	1	0.108	300	0.061	Not Significant
Preventive Practices	25.57	2.96	0.108	1			

Correlation is Significant at 0.05 alpha level ($p<0.05$)

Source: Field Survey, 2023

Table 4.9 shows that knowledge was not tested significant on preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area ($r=0.061$, $p>0.05$). It was further established that knowledge had positive correlation with preventive practices of coronavirus infection; however, the magnitude of the correlation coefficient was weak. This implied that there was no significant relationship between knowledge and preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area. The null hypothesis was therefore tenable. The relationship between knowledge and preventive practices of coronavirus infection implied that, knowledge of coronavirus infection among market traders in Ogbomoso North Local Government Area had insignificant influence on their preventive practices.

Hypothesis Three: There is no significant relationship between attitude and preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area.

Table 4.10: Summary of Analysis on Relationship between Attitude and Preventive Practices of Coronavirus Infection

Variables	Mean	Std. Dev.	Attitude	Preventive Practices	N	Sig. (p value)	Remark
Attitude	26.35	4.75	1	-0.116	300	0.044	Significant
Preventive Practices	25.57	2.96	-0.116	1			

Correlation is Significant at 0.05 alpha level (p<0.05)

Source: Field Survey, 2023

Table 4.10 shows that attitude was tested significant on preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area (r=-0.116, p<0.05). It further established that attitude had negative correlation with preventive practices of coronavirus infection; but the magnitude of the correlation coefficient was weak. This implied that there was a low but significant negative relationship between attitude and preventive practices to coronavirus infection among market traders in Ogbomoso North Local Government Area. The null hybpothesis was therefore rejected. The relationship between attitude and preventive practices implied that, attitude towards coronavirus infection does not translate to positive preventive practices among market traders in Ogbomoso North Local Government Area.

4.3 Discussion of Findings

The findings of this study on socio-demographic characteristics revealed that, most of the respondents were female, while majority were between 32-38 years.This is not different from a research on similar demography in terms of traders in Southwest Nigeria where females are also the majority[1].What is responsible for this may be the nature of the African society where men take to agricultural farm produce and women take the part of marketing and sales[2]. In addition, most of the respondents had secondary education, while majority were sampled from Ayanyan Market. The findings of this study revealed that the level of knowledge of the traders on coronavirus infection was

high among some market traders in Ogbomoso North Local Government Area. This affirmed the level of awareness raised by the government through different government agencies and media to ensure there is a stop in the spread of the infection. It is expected that the traders have high level of knowledge about coronavirus infection following the partnership of the federal government and the Local governments with the help of the state government especially in Oyo State where the Local Government Officials raised awareness among residents of Ogbomoso through the use of materials written in Yoruba language, and also through vaccination drive[3]. This was further established through the responses of majority of the respondents which affirmed that coronavirus infection originated from Whuhan in China.

In addition, majority of respondents confirmed that dry cough, sore throat, and fever are some symptoms of coronavirus infection.These symptoms have received attention for the scientists who have delved into action to ensure many who are infected were quarantined. Also, most of the respondents established that coronavirus infection could be transmitted via infected respiratory droplets and surfaces. Equally, majority of the respondents stated that coronavirus infection can be contracted through inhalation of short distance droplet and direct contact.

Moreover, a considerable number of respondents stated that coronavirus infection may lead to damage of body organs and death, while majority also affirmed that vaccination is a measure to prevent the spread of coronavirus infection. Likewise, majority of the respondents confirmed that suspected individuals with coronavirus infection should be isolated for 14 days. This opinion matches the recommendation of the Nigeria Centre for Disease Control and Prevention that individuals who have travelled to areas with cases of coronavirus infection should be quarantined for 14 days because the typical incubation period is about five days[4]. Furthermore, majority of the

respondents affirmed that not showing signs of coronavirus infection do not mean one cannot have it, while most respondents affirmed that frequent washing of hands with soap and clean water and wearing of nose mask would help reduce the spread of coronavirus infection.

This was evident through the responses of most of the respondents which revealed that they disagreed that news about coronavirus infection does not bother them. In addition, most respondents disagreed that those who are infected with coronavirus infection are careless. Moreover, majority of the respondents disagreed that coronavirus infection is a disease of the rich and those who travel abroad. Besides, most of the respondents disagreed that their trade does not allow them to observe coronavirus infection precautions, while a significant number disagreed that they hardly fall sick, therefore they do not see any need to get vaccinated against coronavirus. Besides, most respondents disagreed that using face mask disturbs, while majority disagreed that it is not convenient for them to always wash their hands every time after attending to each customer. Additionally, most respondents strongly agreed that they are disposed to using of herbs to fight against coronavirus infection. Also, majority of the respondents strongly disagreed that coronavirus infection has less adverse health implication than the noise being made about it and being in less humidity region does not make the disease to thrive.

The outcome of this study also revealed that, the preventive practices of coronavirus infection was high among market traders in Ogbomoso North Local Government Area. This was established through the responses of the respondents which revealed that most of them regularly and sometimes used hands or handkerchief to cover their mouth when coughing. In addition, most respondents often times stay in the sun to sell their goods is better for them than using face mask. Moreover, majority of the respondents often time believe in using herbs to prevent coronavirus infection.

Additionally, most respondents regularly and sometimes used face mask every time at the market. Also, majority of the respondents regularly wash their hands with soap and clean water frequently at the market. In the same vein, most respondents regularly and sometimes made use of hand sanitizer after each sale. Besides, most respondents agreed that regular treating symptoms of fever is a common practice for them, majority respondents agreed that they maintain social distancing while in the crowd. Moreover, most respondents agreed that they willfully isolate themselves if they experience the symptoms of coronavirus infection as a way to prevent its spread. Also, majority of the respondents agreed that vaccination is a major way to prevent the spread of coronavirus infection.

The outcome of this study revealed that knowledge was not tested significant on attitude towards coronavirus infection among market traders in Ogbomoso North Local Government Area. This corroborates a study conducted on, Knowledge and Attitude of People living in Ogbomoso on coronavirus infection, and result revealed that, there was no significant association between knowledge of participants and their attitude towards coronavirus infection. It was therefore recommended that government should take tight actions, control and precautionary measures against coronavirus infection, to safeguard citizens and ensure their well-being, this will increase positive attitudes of the community. Also, the result of this study is in line with a study conducted among residents in Ibadan community, which showed that more people knew that they are liable to contract coronavirus infection while 12% feel coronavirus is exaggerated[5]. There are individuals who believe that the virus does not exist, others conclude that it exists but the politicians are using the outbreak as a means of enriching themselves. This study clearly shows that largely Nigerians have heard of the virus, as infected by 88% percentage of people who have inadequate knowledge about the disease. It was further established that

knowledge had a weak negative correlation with attitude towards coronavirus infection. Through correlation coefficient magnitude was weak. This implied that there was no significant relationship between knowledge and attitude towards coronavirus infection among some selected market traders in Ogbomoso North Local Government Area. The negative relationship between knowledge and attitude implied that, knowledge of coronavirus infection did not lead to changes in attitude among market traders in Ogbomoso North Local Government Area.

The finding of this study on relationship between knowledge and preventive practices of coronavirus infection revealed that knowledge was not tested significant on preventive practices of coronavirus among market traders in Ogbomoso North Local Government Area. This is in line with a study carried out in Greece where it was only 24.9% of healthcare professionals that reported washing their hands before and after they had contact with the patient/patient's environment[6]. Therefore, the result revels that, many of the healthcare professionals do not take part in the preventive practice of coronavirus infection, irrespective of their knowledge of coronavirus infection. On a contrast in another study conducted in Greece, the knowledge score had a significant association with practice score. This is an indication that individuals with a high knowledge score would most likely practice more preventive measures. It was further established in this study that knowledge had non-significant positive correlation with preventive practices of coronavirus infection. Though the magnitude of the correlation coefficient was weak. This implied that there was no significant relationship between knowledge and preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area. The relationship between knowledge and preventive practices implied that, knowledge of coronavirus infection did not have

significant influence on the prventive practices of market traders in Ogbomoso North Local Government Area.

In addition, the outcome of this study further revealed that attitude was tested significant on preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area. This study is in line with a study conducted on Knowledge, Attitudes and Practices towards coronavirus infection: An Epidemiological Survey in North-Central Nigeria. The researchers used Pearson's correlation which provided evidence that attitudes and preventive measures for coronavirus infection were significantly correlated[7].

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Chapter Five

Conclusion

This chapter presents the conclusion of the study.

5.1 Summary of Findings

The findings of this study on socio-demographic characteristics revealed that, most of the respondents were female (186), while males were (114). Majority were between 32-38 years. In addition, most of the respondents had secondary education, while majority were sampled from Ayanyan Market. The findings of this study revealed that the level of knowledge of the traders on coronavirus infection was high among ($\bar{x}$=1.96) market traders in Ogbomoso North Local Government Area. In the same vein, the outcome of this study revealed that the traders' attitude towards coronavirus infection among market traders in Ogbomoso North Local Government Area was positive ($\bar{x}$ =2.64). The outcome of this study also revealed that, the preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area was high ($\bar{x}$=2.56).

The outcome of this study revealed that there was no significant relationship between knowledge and attitude towards coronavirus infection among market traders in Ogbomoso North Local Government Area. It was further established that knowledge had negative correlation with attitude towards coronavirus infection; while correlation coefficient's magnitude was weak. This implied that there was no significant relationship between knowledge and attitude towards coronavirus infection among market traders in Ogbomoso North Local Government Area.

The finding of this study on relationship between knowledge and preventive practices of coronavirus revealed that there was no significant relationship between knowledge and preventive practices of coronavirus among market traders in Ogbomoso

North Local Government Area. It was further established that knowledge had positive correlation with preventive practices of coronavirus infection; while correlation coefficient's magnitude was weak.

In addition, the outcome of this study revealed further that attitude was tested significant on preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area. It was further established that attitude had negative correlation with preventive practices of coronavirus infection; while correlation coefficient's magnitude was weak. This implied that there was a significant negative relationship between attitude and preventive practices among market traders in Ogbomoso North Local Government Area. The relationship between attitude and preventive practices implied that, attitude towards prevention of coronavirus infection among market traders in Ogbomoso North Local Government Area had a reverse (negative) influence on their preventive practices.

5.2 Conclusion

It was concluded in this study is that the level of knowledge of the traders on coronavirus infection was high among market traders in Ogbomoso North Local Government Area. It was further concluded that the traders' attitude was positive towards prevention of coronavirus infection among the market traders. It was also established that the preventive practices regarding curtailing of coronavirus infection was high among the market traders in Ogbomoso North Local Government Area. However, though the high levels observed regard the three independent variables (knowledge, attitude and preventive practices) towards curtailing coronavirus infection did not translate to positive values with regard to coronavirus infection curtailment among market traders in Ogbomoso North Local Government. Moreover, there was a significant

negative relationship between atitutde and preventive practices among market traders in Ogbomoso North Local Government.

5.3 Recommendations

Based on the findings of this study, the following recommendations were made:

1. The authority of Ogbomoso North Local Government Area should encourage markert traders to uphold their knowledge on coronavirus infection. The reseacher will give one copy of the thesis to Ogbomoso North Local Government Authority.
2. The authority of Ogbomoso North Local Government Area in collaboration with State Ministry of Health should organise periodic Health Education programmes specifically on attitude and preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area.
3. Market traders in Ogbomoso North Local Government Area should uphold their preventive practices of coronavirus infection by ensuring that all regulations set-up by the government are strictly adhered to.
4. The market leaders in collaboration with the authority of Ogbomoso North Local Government Area should ensure that market traders do not relent on their positive attitude towards curtailing coronavirus infection.

5.4 Contributions to Knowledge

This study contributed to knowledge in the following ways:

1. This study confirmed that the level of knowledge of the traders on coronavirus infection was high among market traders in Ogbomoso North Local Government Area.

2. It was established that the traders' attitude was positive towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area.
3. This study affirmed that the preventive practices of coronavirus infection was high among market traders in Ogbomoso North Local Government Area.
4. The study established that there was no significant relationship between knowledge and attitude towards curtailing coronavirus infection among market traders in Ogbomoso North Local Government Area.
5. This study affirmed that there was no significant relationship between knowledge and preventive practices of coronavirus infection among market traders in Ogbomoso North Local Government Area.
6. This study established that there was a significant negative relationship between attitude and preventive practices among market traders in Ogbomoso North Local Government Area.

5.5 Suggested Areas for Further Research

The following suggestions were made for further research based on the findings of the study.

1. Similar study to knowledge, attitude and preventive practices of coronavirus infection among markets traders in Ogbomoso North Local Government Area, should be carried out in other Local Government Areas in Oyo State.
2. The study of this nature can be replicated among artisans and other categories of workers in Ogbomoso North Local Government Area.
3. Experimental studies on knowledge, attitude and preventive practices of coronavirus infection can be worked upon by other researchers in the subsequent studies.

These suggested studies can as well be replicated in other localities.

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Appendix I

Lead City University, Ibadan

Department of Kinesiology, Sports Science and Health Education

Consent to Participate in Research

Dear Respondent,

You are being asked to participate in a research which will be conducted by a postgraduate student in the above-named department. The purpose of the study is to obtain your perceptions regarding Corona Virus infection. If you agree to be a participant, you will be asked to complete a questionnaire that has two separate sections. One of the sections is about demographic data and the second section is on knowledge, attitude and preventive practices towards coronavirus infection among market traders in Ogbomoso North Local Government Area, Oyo State. Your participation in the research project is strictly voluntary and you have every right to decline participation. You are also assured of confidentiality while participating. To make sure your participation is confidential, please do not put any personal identifying information on the questionnaire. By signing below indicates your voluntary participation in the research.

Thank you.

_____ _____

Signature of Respondent Date

Appendix II

Department of Kinesiology, Sports Science and Health Education

Faculty of Arts and Education

Lead City University, Ibadan, Oyo State

Questionnaire

Dear Respondent,

The researcher is a postgraduate student of the Department of Kinesiology, Sport Sciences and Health Education, Lead City University. The researcher is conducting a study on Knowledge, Attitude and Preventive Practices of Coronavirus infection among Market traders in Ogbomoso North Local Government Area, Oyo State. This questionnaire is therefore designed to elicit information in relation to the variables being studied.

Your response to the question items below shall be highl infectiony appreciated, treated confidentially and used strictly for academic purposes. Kindly fill them as appropriate.

Thank you for your anticipated cooperation.

Ajibade Olajoke Seye (Researcher)

Section A: Socio-Demographic Information

Instruction: Please tick (√) in the column as it applies to you in each of the following items

1. **Sex**: a. Male [ ] b. Female [ ]
2. **Age**: a. 18-24 years [ ] b. 25-31 years [ ] c. 32-38 years [ ] d. 39 years and above [ ]
3. **Academic Qualification**: a. No Formal Education [ ] b. Primary Education [ ] c. Secondary Education [ ] d. Tertiary Education [ ]
4. **Market**: a. Ayanyan Market [ ] b. Butcher Market [ ] c. Oja Igbo [ ] d. Waso Market [ ]

Section B: Knowledge of Coronavirus Infection Scale (KCIS)

Instruction: Please tick (✓) in the appropriate column that suits your response in the following statements: Yes or No.

S/N	Statements	Yes	No
1	Coronavirus infection originated from Whuhan in China		
2	Dry cough, sore throat, and fever are some symptoms of coronavirus infection.		
3	Coronavirus infection could be transmitted via infected respiratory droplets and surfaces.		
4	Coronavirus infection can be contracted through inhalation of droplet and direct contact.		
5	Coronavirus infection may lead to damage of body organs and death.		
6	Vaccination is a measure to prevent the spread of coronavirus infection.		
7	Suspected individuals with corona virus infection should be isolated for 14 days.		
8	Not showing signs of coronavirus infection do not mean one cannot have it.		
9	Frequent washing of hands with soap and clean water and wearing of nose mask will help reduce the spread of coronavirus infection.		

Section C: Attitude towards Coronavirus Infection Scale (ACIS)

Instruction: Please tick (✓) in the appropriate column to indicate the extent to which you agree or disagree with the statement below;
Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD)

S/N	Statements	SA	A	D	SD
1	News about coronavirus infection does not bother me.				
2	Those who are infected with coronavirus Infection are careless.				
3	Coronavirus infection is of the rich and those who travel abroad.				
4	My trade does not allow me to observe coronavirus Infection precautions.				
5	Observing the coronavirus infection safety precautions is a reflection of lack of faith in God.				
6	I hardly fall sick therefore I do not see any need to get vaccinated against coronavirus infection.				
7	Using face mask disturbs me.				
8	It is not convenient for me to always Wash my hands every time after attending to each customer.				
9	I'm disposed to using of herbs to fight against coronavirus Infection.				
10	Coronavirus infection has less adverse health implication than the noise being made about it and being in less humidity region does not make the disease to thrive.				

Section D: Preventive Practice toward Coronavirus Infection Scale (PPCIS)

Instruction: Please tick (✓) in the appropriate column that suits your response in the following statements: Regularly (RE), Sometimes (SM) and Never (NE).

Key: Regularly (Everyday) Sometimes (Once in a week) Never (Not done at all)

s/n	Statements	RE	SM	NE
1	I use my hands or handkerchief to cover my mouth when coughing.			
2	Staying in the sun to sell my goods is better for me than using face mask.			
3	I believe in using herbs to prevent coronavirus infection.			
4	I use face mask every time at the market.			
5	I wash my hands with soap and clean water frequently at the market.			
6	I make use of hand sanitizer after each sale.			
7	Treating symptoms of fever is a common practice for me.			
8	I maintain social distancing while in the crowd.			
9	I will willfully isolate myself if I experience the symptoms of coronavirus infection as a way to prevent its spread.			
10	Vaccination is a major way to prevent the spread of coronavirus infection.			

Appendix II

Eka Eko ti Kinesiologi, Ere Idaraya ati Ilera

Unifasiti Lead City ni Ilu Ibadan, Ipinle Oyo

Awon Ibeere ti Mo ni Fun Yin

Eyin Olufesisi Mi,

Mo je eni ti o n se iwadi lati Agbon Eko Kinesiologi, Ere Idaraya ati Ilera ti Unifasiti Lead City. Mo n se iwadi nipa imo, ikohasi ati awon asa idaabobo arun Korona laarin awon oloja ni asayan oja ni ijoba ibile Ogbomoso North ni ipinle Oyo. Awon ibeere wonyi ni mo ti se akojopo re lati gba imo nipa iwadi ti mo n se.

Esi yin si awon ibeere ni mo fe, ti mo si dupe fun. Awon esi yin yio wa fun emi nikan lati je lilo fun iwadi nikan ninu eko mi. E jowo, e bami dahun awon ibeere yi gege bi o se je.

E seun lopolopo.

Ajibade Olajoke Seye (Olusewadi)

Ipin A: (Ibeere nipa awujo Olufesisi)

Itona: E jowo, e dahun ibeere wonyi bi o se ri sii yin nipa fifa ila si iwaju awon asayan wonyi.

1. **Nje Obinrin niyin tabi okunrin**: a. Okunrin [ ] b. Obinrin [ ]
2. **Omo Odun Melo niyin?**: a. 18-24 years [ ] b. 25-31 years [ ] c. 32-38 years [ ] d. 39 years and above [ ]
3. **Gbedeke Eko wo le ni?**: a. Mi o kawe rara [ ] b. Alakobere [ ] c. Girama [ ] d. Ile Iwe Giga [ ]
4. **Oja wo le ti n taja?**: a. Ayanyan [ ] b. Butcher [ ] c. Oja Igbo [ ] d. Waso [ ]

Ipin B: Imo Nipa Arun Korona (INAK)

Itona: E jowo, e se ami (✓) lati dahun ati lati so beeni tabi beeko si awon gbolohun wonyi:

Beeni, Beeko.

s/n	**Gbolohun**	Beeni	Beeko
1	Lati Ilu Whuwan ni orile-ede China ni aarun Korona ti tan wa.		
2	Nje lati ipase ijo re tabi Mosalaasi tabi lori ayelujara lo ti gbo nipa aarun Korona bi?		
3	Iko gbigbe, egbo ona ofun tabi iba je ami COVID-19.		
4	Eniyan lee ko aarun Korona latipase fifi ara kan ito eniti o ti ni aarun na tabi ibiti eni naa ti fi ara kan.		
5	COVID-19 a maa ran eniyan nipa mimi legbe eni ti o ni aisan naa ati fifi ara kan eni ti o ni arun Korona.		
6	COVID-19 lee ba ago ara eniyan je.		
7	Gbigba abere ajesara ti aarun Korona je ona kan lati gbogun ti itankale aarun naa.		
8	Awon ti a ba kefin pe won ni aarun korona gbodo ya ara won sapakan fun ojo merinla.		
9	Wipe mi o rii ami arun Korona laara mi o tumo si wipe mi o ni arun na.		
10	Fifo owo mi loorekoore pelu ose ati omit i o mo ati lilo ibomu je ona lati dena aarun korona.		

Ipin D: Opo Imo Nipa Ikohasi Awon Eniyan Si Aarun Korona (OINIAESAK)

Itona: E jowo, e se ami (√) lati dahun ati lati so bi e ti fara mo awon gbolohun wonyi to abi e ko fara mo.

Mo faramo daada (MFD), Mo faramo (MF), Mi o faramo (MOF) Mi o faramo daada (MOFD)

s/n	Gbolohun	MFD	MF	MOF	MOFD
1	Iroyin nipa aarun korona ko pami laya rara				
2	Ailakiesi to lo je ki awon ti o ni arun korona lugbadi aarun naa.				
3	Aarun awon olowo ati awon to n re ‘lu odikeji ni arun Korona.				
4	Owo ti mo n se ko gba mi laaye lati se ohun to pe fun lati daabo bo ara mi.				
5	Ainigbagbo to ninu Olorun lo mu awon eniyan gbe igbese idabobo.				
6	Mi o kii se aisan nigbagbogbo, nitorina, mi o nilo lati gba abere ajesara ti aarun Korona.				
7	Lilo ibomu a maa se idiwo fun mi.				
8	O soro fun mi lati maa fo owo mi l’oja leyin ti mo ba ta oja fun ikookan onibara mi.				
9	Lilo agbo ibile nikan to fun mi lati gbogunti arun Korona.				
10	Arun Korona kose ipanilara pupo bi awon eniyan se n pariwo re to ni awujo ati wipe agbegbe wa ko je ki aarun naa gbile rara.				

Ipin E: Opon Imo Bi a Se n Daabo bo Ara Eni (OIBSDAE)

Itona: E jowo, e se ami (✓) lati dahun ati lati so iye igba ti e n se awon nkan wonyi: Nigbagbogbo (RE), Fun Igba die (SM) and Mi o ki n se rara (NE).

Key: **N**igbagbogbo (Ojoojumo) **F**un Igba die (Ekan lose) **R**ara (Mi o see ri)

S/N	Gbolohun	N	F	R
1	Mo ma lo owo mi tabi aso lati bo enu mi nigbati mob a n wuko			
2	O pe mi lati ta awon nkan ti mo n ta ninu orun ju ki n lo ibomu lo.			
3	Mo gbagbo ninu lilo agbo lati daabobo ara mi ki n ma baa ko arun Korona.			
4	Mo maa lo ibomu mi nigbagbogbo ninu oja			
5	Mo ma n fo wo mi pelu ose ati omi ti o mo lolo leyin ti mo ba taja tan fun onibara kookan.			
6	Mo ma n lo ogun sanitizer ti owo ninu oja.			
7	Mo ma n toju ara mi nigba gbogbo ti mo ba ko firi arun iba			
8	Mo maa n takete si awon eniyan ti mo ba wa laarin ero.			
9	Maa moomo ya ara mi sapakan ti mo ba keefin awon ami aarun korona.			
10	Gbigba abere aarun korona je ona kan gbogi lati dena aarun korona.			

Appendix III

Analyses of Tables

Reliability

Case Processing Summary

		N	%
Cases	Valid	20	100.0
	Excluded[a]	0	.0
	Total	20	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
.836	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR00001	66.1000	78.200	.460	.831
VAR00002	66.1000	79.253	.295	.834
VAR00003	66.0500	78.682	.465	.832
VAR00004	66.1000	79.253	.295	.834
VAR00005	66.1000	78.200	.460	.831
VAR00006	66.1000	78.937	.344	.833
VAR00007	66.0500	80.155	.193	.836
VAR00008	66.3000	79.800	.146	.837
VAR00009	66.1000	79.674	.230	.835
VAR00010	66.2500	77.250	.465	.830
VAR00011	65.0500	74.471	.329	.834
VAR00012	64.9500	77.313	.216	.837
VAR00013	65.6500	70.766	.582	.822
VAR00014	65.4000	74.042	.512	.826
VAR00015	64.9000	73.779	.443	.828
VAR00016	65.3500	72.871	.387	.831
VAR00017	65.5500	72.366	.544	.824
VAR00018	65.3500	74.661	.422	.829
VAR00019	65.0000	72.211	.448	.828
VAR00020	64.9500	74.155	.477	.827
VAR00021	65.8000	74.589	.479	.827
VAR00022	66.0500	80.155	.038	.843
VAR00023	66.3000	93.063	-.701	.872
VAR00024	65.6500	72.871	.632	.822
VAR00025	65.6000	74.989	.447	.828
VAR00026	65.7000	69.695	.767	.815
VAR00027	65.6500	78.029	.246	.835
VAR00028	65.7000	71.695	.751	.818
VAR00029	65.3500	74.450	.484	.827
VAR00030	65.3500	76.766	.488	.829

Reliability Statistics

Cronbach's Alpha	N of Items
.846	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR00001	16.4000	4.674	.811	.807
VAR00002	16.4000	5.200	.454	.839
VAR00003	16.3500	4.976	.744	.817
VAR00004	16.4000	5.095	.522	.833
VAR00005	16.4000	4.674	.811	.807
VAR00006	16.4000	5.095	.522	.833
VAR00007	16.3500	5.187	.578	.830
VAR00008	16.6000	4.884	.448	.845
VAR00009	16.4000	4.884	.663	.821
VAR00010	16.5500	5.524	.157	.874

Reliability Statistics

Cronbach's Alpha	N of Items
.842	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR00011	24.4500	29.103	.439	.837
VAR00012	24.3500	30.450	.400	.839
VAR00013	25.0500	29.103	.466	.834
VAR00014	24.8000	28.589	.716	.814
VAR00015	24.3000	29.484	.488	.831
VAR00016	24.7500	28.303	.470	.835
VAR00017	24.9500	27.629	.708	.811
VAR00018	24.7500	30.618	.406	.838
VAR00019	24.4000	26.463	.686	.811
VAR00020	24.3500	28.555	.682	.816

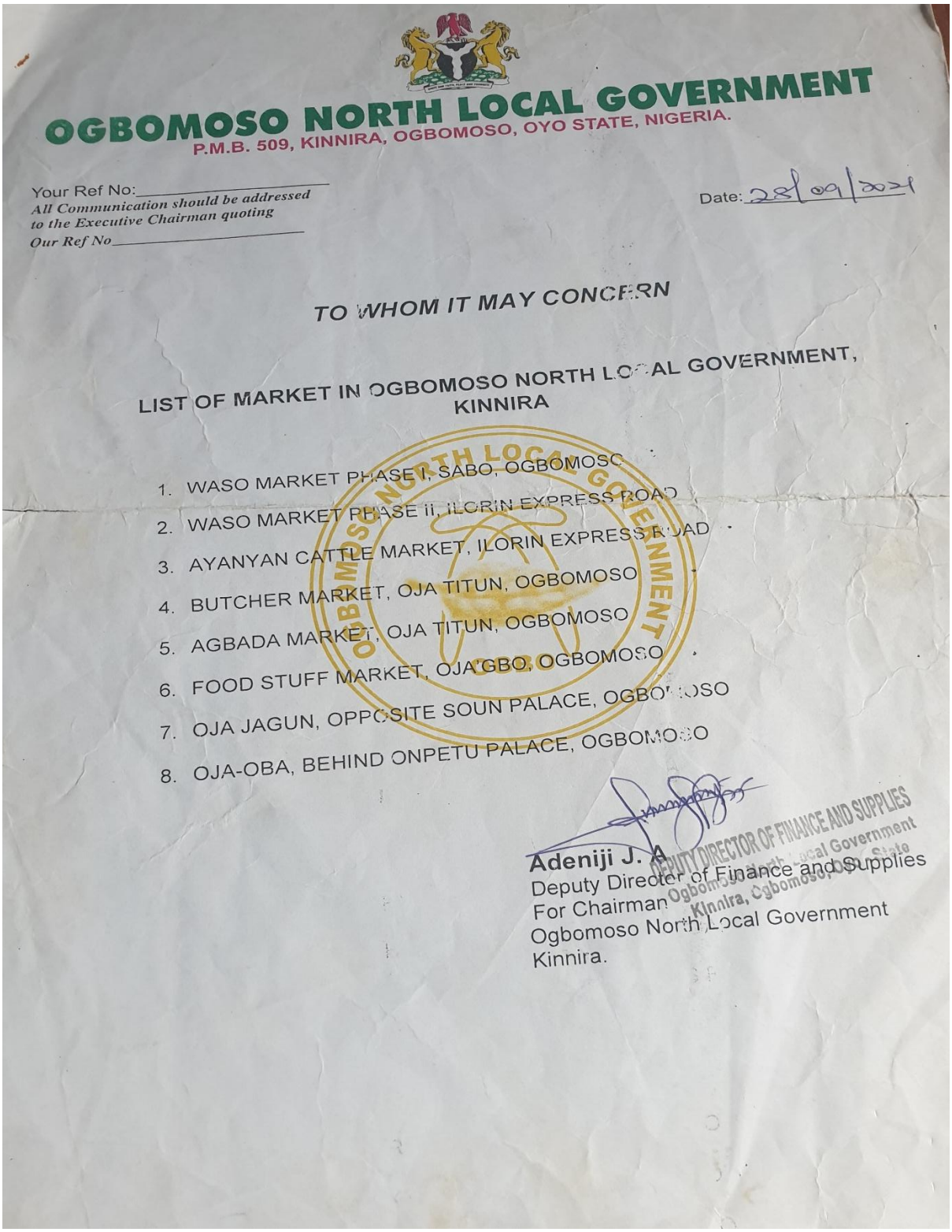
Reliability Statistics

Cronbach's Alpha	N of Items
.662	10

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR00021	20.2000	11.537	.362	.630
VAR00022	20.4500	13.945	-.109	.721
VAR00023	20.7000	16.642	-.471	.803
VAR00024	20.0500	10.366	.640	.572
VAR00025	20.0000	10.737	.539	.593
VAR00026	20.1000	9.568	.690	.548
VAR00027	20.0500	11.208	.519	.603
VAR00028	20.1000	10.200	.702	.561
VAR00029	19.7500	10.724	.533	.594
VAR00030	19.7500	12.092	.452	.625

Appendix IV



OGBOMOSO NORTH LOCAL GOVERNMENT
P.M.B. 509, KINNIRA, OGBOMOSO, OYO STATE, NIGERIA.

Your Ref No:_____
All Communication should be addressed to the Executive Chairman quoting
*Our Ref No*_____

Date: 28/09/2021

TO WHOM IT MAY CONCERN

LIST OF MARKET IN OGBOMOSO NORTH LOCAL GOVERNMENT, KINNIRA

1. WASO MARKET PHASE I, SABO, OGBOMOSO
2. WASO MARKET PHASE ii, ILORIN EXPRESS ROAD
3. AYANYAN CATTLE MARKET, ILORIN EXPRESS ROAD
4. BUTCHER MARKET, OJA TITUN, OGBOMOSO
5. AGBADA MARKET, OJA TITUN, OGBOMOSO
6. FOOD STUFF MARKET, OJA'GBO, OGBOMOSO
7. OJA JAGUN, OPPOSITE SOUN PALACE, OGBOMOSO
8. OJA-OBA, BEHIND ONPETU PALACE, OGBOMOSO

OGBOMOSO NORTH LOCAL GOVERNMENT

DEPUTY DIRECTOR OF FINANCE AND SUPPLIES
Local Government
Kinnira, Ogbomoso, Oyo State

Adeniji J. A
Deputy Director of Finance and Supplies
For Chairman
Ogbomoso North Local Government
Kinnira.

Analyses of Photographs

Appendix V

Fig. 1: Research Assistant at Food Stuff Market, Oja'gbo, Ogbomoso

Fig. 2: Research Assistant with a Pepper Seller at Food Stuff Market, Oja'gbo, Ogbomoso

Figure 3: A Trader Filling the Questionnaire at Waso Market, Phase 1, Sabo, Ogbomoso

Fig. 4: A Research Assistant with Pepper Sellers at Waso Market, Phase 1, Sabo, Ogbomoso

Fig. 5: A Research Assistant with a Meat Seller at Butcher Market, Oja Titun, Ogbomoso

Fig. 6: A Research Assistant with a Meat Seller at Butcher Market, Oja Titun, Ogbomoso.

Fig. 7: Researcher with Some Cattle Traders at Ayanyan Cattle Market, Ilorin Express Road

Fig. 8: Researcher with Some Cattle Traders at Ayanyan Cattle Market, Ilorin Express Road

Fig. 9: Researcher and her Research Assistants at Butcher Market, Oja Titun, Ogbomoso

Fig. 10: Researcher and her Research Assistants at Food Stuff Market, Oja'gbo, Ogbomoso

Bio-Data

A. Personal Data

Name: Olajoke seye AJIBADE

Date of birth: March 22, 1968

Place of birth: Kenu, Kwara State

Nationality: Nigerian

Religion: Christianity

Languages spoken: English, Yoruba, Baruba

Hobbies: Music, drama, sporting (basketball, hockey, handball)

Marital status: Married

No of children: Two

Home Address: Nigerian Baptist Theological Seminary, Ogbomoso

Postal Address: P.O Box, 80, Ogbomoso, Oyo State.

Next of Kin: Revd. Ezekiel A. Ajibade, Ph.D

Relationship: Husband

Address of Next of Kin: The Nigerian Baptist Theological Seminary, Ogbomoso.

B. Educational Institutions Attended With Dates

Local School Management Board School, Kenu	1975-1977
Local School Management Board School, New Bussa	1977-1978
Local School Management Board School, Kaiama	1978-1980
Teachers Training College, New Bussa	1980-1985
St Andrew's College of Education, Oyo.	1987-1990
University of Ilorin	1993-1996
The Nigerian Baptist Theological Seminary, Ogbomoso	2015-2020

Certificates Acquired

First School Leaving Certificate	1980
Teacher Grade II Certificate	1987
National Certificate of Education	1990
Bsc. Ed Health Education	1997
NYSC Discharge Certificate	1998
M.Dv Theology Certificate	2020

C. Working Experiences with Date

Head Teacher, FBC Nursery/Primary School, Kaiama	1990
Class Teacher, LA Primary School, Ofiki	1991-1993
Supervisor, Nigerian National Census	1991
Class Teacher, NIFFR Staff School, New Bussa	1998
Class Teacher, FGGC Staff School, New Bussa	1999
Class Teacher, Redeemers Int'l School, Kaduna	2000
Class Teacher, Chloe Heights Int'l School, Kaduna	2001
mith International Baptist Academy, Ogbomoso	2003-2006
Ogbomoso Grammar School, Ogbomoso	2006-2007
Administrator, FGGC Staff Primary School, New Bussa	2007-2014
Assistant Lecturer, Nigerian Baptist Theological Seminary	2014- Date

Training Programmes Attended

Women Training Center, NBTS, Ogbomoso	2002-2005
The Stephen Olford School of Preaching, New Bussa	2013
Family Empowerment Conference, Berlin, Germany	2013

D. Award and Fellowships

Green House Captain	1984-985

B.S.F President, First Baptist Church, Kaiama	1988-1990
Welfare Secretary, Unilorin Christian Union	1995-1996
Pastors' Wives Programme Co-ordinator, Ogbomoso North East Baptist Association	2005-2007
Pastors' Wives Treasurer, CAN N/ Bussa	2012-2014
Children Minister, New Heritage Baptist Church	2015-2020
Chairman, Social Committee, NBTS, Ogbomoso	2018-Date

E. Publications

1. Ogunkanmbi, Olajoke Seye. Mid-day Meal Programme in Public Schools in Oyo Town. An Essay submitted to the Department of Physical and Health Education, St Andrews College of Education Oyo, in partial fulfilment of the requirements for the Award of National Certificate of Education (NCE), 1990.

2. Ogunkanmbi, Olajoke Seye. The Prevalence of Communicable Diseases among some selected secondary schools in Ilorin West Local Government Area of Kwara State. A Research project submitted to the Department of Physical and Health Education, University of Ilorin, in partial fulfilment of the requirement for the Award of Bachelor of Science Degree in Health Education, 1997.

3. Ajibade, Olajoke Seye**.** Assessment of the Impact of Pastor's Personal Hygiene on Home & Ministry in Goshen Baptist Association. Master of Divinity in Theology Project, the Nigerian Baptist Theological Seminary, 2020.

Articles in Learned Journals

1. **Adejuwon, K. & Ajibade O.** *An Overview of the Women Training Centre of The Nigeriasn Baptist Theological Seminary, Ogbomoso and effective Role Performance of the Pastor's Wife in Ministry* in **OJOT** Vol. XXIII No 3, 2018: 111- 124.

2. **Adejuwon, K., & Ajibade O.** "Christian Women and Hospitality as Contribution to Missions during Covid-19 Pandemic" in **OJOT** VOL No XXVI No2, 2021: 62-80.

F. Membership of Learned Societies

1. International Council for Higher Education – 2016 - date

2. Sacred Earth Ministry – 2018 - date

3. African Homolectics Society – 2023 - date

G. Major Conferences Attended with Dates

1. Annual International Theological Education Conference (ITEC), Nigerian Baptist Theological Seminary, Ogbomoso (2016 – date)

2. ICHE West Africa Network Conference, Nigerian Baptist Theological Seminary, Ogbomoso (2016 – date)

3. Sacred Earth Ministry Workshop, Nigerian Baptist Theological Seminary, Ogbomoso (2016 – date)

4. African Homiletics Society Conference, Nigerian Baptist Theological Seminary, Ogbomoso (May 15-18, 2023)

5. West Africa Association of Theological Institutions (WAATI) Conference, Nigerian Baptist Theological Seminary, Ogbomoso (2019).

6. Theological Educators Congress, Nigerian Baptist Theological Seminary, Ogbomoso (Virtual 2021 – date)

7. Africa Baptist Theological Education Network, Nigerian Baptist Theological Seminary, Ogbomoso (July 4-7, 2022)

H. References

1. Prof. S. Ola Ayankeye
   President
   Nigerian Baptist Theological Seminary, Ogbomoso

2. Dr. Faderera Adepoju
   Head of Deparment,
   Department of Kinesiology, Sports & Health Education
   Lead City University

---------- ----------

Signature **Date**

The University Compliance Certification

This is to certify that this Thesis written by **Olajoke Seye AJIBADE** with Matric No: **LCU/PG/01776** in the Department of Kinesiology, Sports Science & Health Education, Faculty of Education, Lead City University, Ibadan is in full compliance with the approved University format and style.

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