

University of Ghana <http://ugspace.ug.edu.gh>

SCHOOL OF PUBLIC HEALTH

COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA



**COMMUNITY KNOWLEDGE, ATTITUDES AND PRACTICES RELATING TO
COVID-19 AMONG TAXI DRIVERS IN LA DADE-KOTOPON DISTRICT:**

A CASE STUDY OF KOTOKA INTERNATIONAL AIRPORT

BY

PRINCESS DIANA TSADIDEY

(10231083)

**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA,
LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
AWARD OF MASTER OF PUBLIC HEALTH (MPH) DEGREE**

MARCH, 2022

DECLARATION

I, PRINCESS DIANA TSADIDEY hereby declare that except for references to other people's work which have been duly acknowledged, this dissertation is a result of my own original work undertaken under the supervision of Prof. Philip Baba Adongo. I also declare that no part of this work has been submitted for the award of any degree in this university or elsewhere.


.....

12-09-2022
.....

PRINCESS DIANA TSADIDEY

DATE

(STUDENT)


.....

12/09/2022
.....

PROF. PHILIP BABA ADONGO

DATE

(SUPERVISOR)



DEDICATION

I dedicate this work to my beloved husband Eugene Idan, my parents and my children, Danielle Edinam Idan, Stephanie Efenu Idan and Jeshurun Etornam Idan.



ACKNOWLEDGEMENT

I thank God Almighty for bringing me this far. I am especially grateful to my husband, Eugene Idan for his love and support. I could not have done this without him. I am also grateful to my supervisor, Prof. Philip Baba Adongo for his guidance.

I wish to express my gratitude to Mr. John Agbenyegah, chairman of the KIA Taxicab operators union, Nana Acheampong and all the members of the taxicab union especially those who participated in this study, for their time and warm reception. Finally, I wish to thank my colleague students, friends, and everyone who in one way or another made this dissertation possible.



ABSTRACT

The covid-19 pandemic is one disease that has shaken the socio-economic status of almost every country in the world. Various social strata have not been spared. The concern of covid-19 spans oceans and continents. The current study sought to primarily assess the knowledge and practices relating to COVID-19 and as well as sources of information of the virus among taxi drivers at the Kotoka International Airport in the La Dade-Kotopon District. The study used a qualitative research design. Purposive sampling approach was adopted to sample out the respondents at the port.

Fifteen (15) respondents, members of the KIA Taxicab operators union were engaged with in-depth interviews using a semi-structured interview guide. An audio recorder and a field notebook were used in collecting data for thematic analysis.

The study came out with the following key findings: the knowledge base of the taxi-drivers on the COVID-19 is quite high although some degree of misconception existed. Most of the taxi drivers perceive themselves to go by the standard protocols on the disease but in practice deviated from the expected norm. This deviation is motivated by religious sentiments, cultural conducts, and lack of belief in the political power. It was observed that most of the respondents prefer aligning themselves to traditional herbal medicine to treat symptoms of the disease rather than the orthodox procedures as stipulated by the world and the Ministry of Health. The respondents received knowledge on COVID-19 from various sources, but the predominant ones were, radio, television, family and friends, workplace facilities and Community information Vans by the National Communication Authority. In conclusion the study revealed that the knowledge on COVID-19 is very high and the practice of protocols regarding the disease are

quite high, though some people still deviate from the practice based on their personal beliefs regarding the existence of the disease.

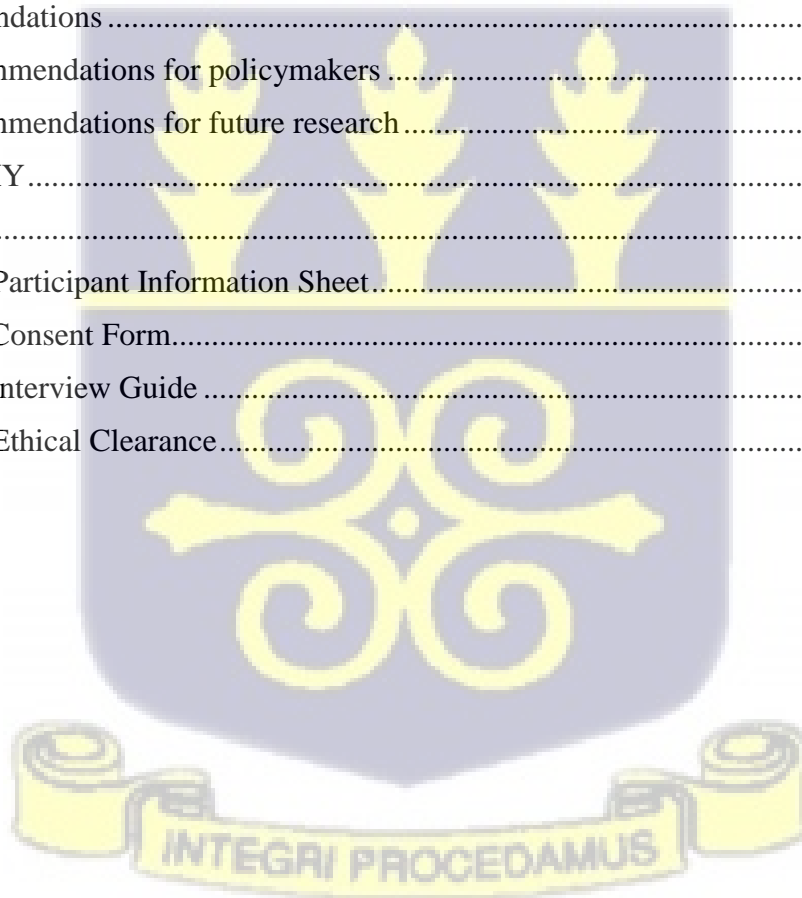


TABLE OF CONTENTS

DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	iv
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS.....	x
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement	3
1.3 Research Questions	5
1.4 Research Objectives	5
1.4.1 General Objective:.....	5
1.4.2 Specific objectives:.....	5
1.5 Justification for the study	6
1.6 Conceptual Framework: Community knowledge, attitudes and practices relating to Covid-19 among Taxi Drivers in La Dade-Kotopon District.....	8
1.6.1 Narrative for Conceptual Framework.....	9
CHAPTER TWO	11
LITERATURE REVIEW	11
2.1 COVID-19 Situation	11
2.1.1 Global	11
2.1.2 Africa	14
2.1.3 Ghana.....	15
2.2 Epidemiology	17
2.3 Clinical Manifestation	18
2.4 Vaccine Development and Administration	19
2.5 Knowledge about COVID-19.....	20
2.6 Misconceptions.....	21
2.7 Prevention and Containment	23
2.8 COVID-19 and Ebola Response in Ghana.....	24

2.9 Conclusion.....	25
CHAPTER THREE	26
METHODOLOGY	26
3.1 Research Design.....	26
3.2 Research Setting/Area.....	26
3.3 Research Population.....	27
3.4 Themes Explored.....	28
3.5 Sampling Technique.....	28
3.6 Participants Selection	28
3.7 Data Collection Technique.....	29
3.8 Data Collection Tools.....	29
3.9 Quality Control.....	30
3.10 Data processing and analysis.....	30
3.11 Limitations	31
3.12 Inclusion Criteria.....	31
3.13 Exclusion Criteria.....	32
3.14 Pretesting.....	32
3.15 Ethical Consideration.....	32
3.16 Conclusion.....	32
CHAPTER FOUR.....	33
RESULTS	33
4.1 Introduction	33
4.2 Demographic Distribution of the Respondents.....	33
4.3 Knowledge on COVID-19	34
4.3.1 Knowledge about Symptoms.....	34
4.3.2 Knowledge about transmission.....	35
4.3.3 Knowledge about prevention.....	36
4.3.4 Knowledge about treatment.....	37
4.4 Misconceptions about COVID-19.....	38
4.5 Practices relating to COVID-19	40
4.5.1 Observation of the COVID-19 Protocol.....	41
4.5.2 Self-Medication	42

4.6 Sources of information on COVID-19	43
CHAPTER FIVE	46
DISCUSSION	46
5.0 Introduction	46
5.1 Knowledge on COVID-19	46
5.2 Misconceptions.....	47
5.3 Attitudes and Practices relating to COVID-19.....	48
5.4 Sources of information on COVID-19	49
CHAPTER SIX.....	51
SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS	51
6.1 Conclusion.....	51
6.2 Summary of Key Findings	51
6.3 Recommendations	52
6.3.1 Recommendations for policymakers	52
6.3.2 Recommendations for future research.....	53
BIBLIOGRAPHY	54
APPENDICES	60
Appendix A: Participant Information Sheet.....	60
Appendix B: Consent Form.....	63
Appendix C: Interview Guide	65
Appendix D: Ethical Clearance.....	67



LIST OF FIGURES

Figure 1: Conceptual Framework 8



LIST OF ABBREVIATIONS

CDC	-	Centers for Disease Control
COVID-19	-	Coronavirus Disease 19
GHS	-	Ghana Health Service
ICU	-	Intensive Care Unit
LMICs	-	Low- and Middle-Income Countries
MoH	-	Ministry of Health
NGOs	-	Non-Governmental Organizations
PPEs	-	Personal Protective Equipment
SARS-CoV-2	-	Severe Acute Respiratory Syndrome Coronavirus 2
UNICEF	-	United Nations Children's Fund
WHO	-	World Health Organization
EVD	-	Ebola Virus Disease



CHAPTER ONE

INTRODUCTION

1.1 Background

Coronavirus disease 19 (COVID-19) is the disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a newly discovered type of coronavirus. The virus was first reported on 31st December 2019, after there had been series of reported cases of a pneumonia-like infection with unknown cause, in Wuhan, China (WHO, 2020).

According to WHO reports, some of the patients who had the infection were vendors in a seafood market. The first cases reported in China on 3rd January 2020 were 44 in total with 11 said to be severely ill and 33 in stable condition. All these patients were said to be in isolation and receiving treatment (WHO, 2020). Contact tracing and follow up started after these cases were identified. Investigations into the cases to identify the cause also began.

After the first person got infected from an animal host, human-to-human transmission of the virus started (WHO, 2020). The main route of transmission of the virus is from human-to-human, as indicated by WHO, is through contact with respiratory droplets from an infected person. These respiratory droplets can be contacted directly from sneezing or talking or when they settle on surfaces.

The most common symptoms of COVID-19 are fever (temperature over 37.5°C), dry cough, fatigue, loss of taste or smell (WHO, 2020). Other people are asymptomatic because they do not exhibit any symptoms of the disease (Baj et al., 2020).

Currently, there are vaccines being used for COVID-19 that have been approved by (the) WHO. According to the Centers for Disease Control and Prevention (CDC, 2020), individuals can

protect themselves from getting infected with the virus by ensuring the following measures: wearing a mask that covers the nose and mouth, staying 6 feet apart from others, washing hands often with soap under running water or using hand sanitizer (when water and soap is not available) and staying at home, routinely disinfecting and cleaning frequently touched surfaces, avoiding crowds and poorly ventilated spaces and getting a vaccine when it is available to you.

The Corona virus pandemic has put a lot of strain on health facilities and resources the world over. Even in developed countries like the United States of America, (U.S.A.), United Kingdom (U.K), Italy, France and Spain, there has been considerable burden on Intensive Care Unit (ICU) beds, health care workers, personal protective equipment (PPEs), and ventilators (Institute for Health Metrics and Evaluation, (2020) as cited in Afriyie et al., (2020).

The WHO predicted a high infection and mortality rate from the virus for Africa owing to the Africa's difficulty in dealing with both infectious and non-infectious diseases alongside its fragile health system (Afriyie at al., 2020). However, it was observed that the rate of infection and mortality in Africa is comparatively low to that of Europe and the Western countries; "there have been almost 1,000 deaths and more than 19,000 infections across Africa so far, although these rates are far lower than those seen in parts of Europe and the U.S." (WHO, 2020).

The first case in Ghana was recorded on 12th March 2020. The government of Ghana led by the President took essential and proactive measures including a partial lockdown of Greater Accra and Ashanti Regions to help contain the spread. Again, there were enhanced contact tracing and testing. The government also established five key objectives to address the potential effects of the COVID-19 pandemic in Ghana: limit and stop the importation of the virus, contain its spread, provide adequate care for the sick, limit the impact of the virus on social and economic life, and

expand domestic production capability to strengthen self-reliance (GNA, 2020, as cited in Afriyie et al., 2020).

Due to the proactive measures put in place by the government of Ghana, the rate of enhanced testing ranked Ghana number one in Africa in terms of administering tests per million people as of April 19, 2020 (GNA, 2020, as cited in Afriyie et al., 2020).

Also, measures were taken to enable local production of sanitizers and PPEs to help address the importation shortages of these products. Ghanaians were also entreated to improve their diets to boost their immune system (Afriyie et al., 2020). All these measures notwithstanding, there are still misconceptions and misinformation about the disease among the Ghanaian populace.

There is a sense in which because of the travel history associated with the first two cases, a section of the populace believes the disease is for the rich and people who travel. There are also some members of the community who are taking concoctions to boost their immune system and prevent them from contacting the disease.

Considering all these misinformation and misconceptions, it is essential for research to be conducted to assess the knowledge base and attitudes as well as practices of the members of the community to help appreciate how far the education on COVID-19 has gone and to help prevent an upsurge of the disease.

1.2 Problem Statement

The discovery of the novel coronavirus which causes COVID-19 in China in December 2019 has led to mortality and morbidity across the world. Starting from China, the disease has spread around the world. As of 2nd May 2021, there were 151,803,822 confirmed cases with 3,186,538

deaths worldwide. The most affected countries include USA, India, Brazil, France, Turkey, and Russia.

The statistics for Africa stood at 3,276,376 cases and 82,552 deaths as of 2nd May 2021 across 47 countries (WHO, 2021). The COVID-19 situation in Ghana as of 27th April 2021 stood at 92,601 confirmed cases and 779 deaths. Out of the number of confirmed cases, 1574 were active cases (GHS, 2021).

Though the case count for Ghana seems to be relatively low compared to other countries, the increases in infections around the world poses a threat to Ghana because there is still travel in and out of the country to different parts of the world.

The issue of weak health systems and practices of Ghanaians (handshaking or hugs during greetings) all present the possibility of increased number of infections. Increase in the number of infections will put a lot of pressure on the already weak health systems and lead to a possible crisis.

Again, according to (Zhou et al., n.d.), “the lessons learned from the 2003 SARS outbreak indicate that knowledge and attitudes about infectious diseases are related to panic among the population which may further complicate efforts to prevent the spread of the infectious diseases” (p.1) They further reiterate that the misunderstandings result in behaviors such as underestimating the disease and creating panic which is likely to lead to ineffective measures to avoid infection. These behaviors are likely to spread the epidemic rather than control it.

Again, they argue that according to the Knowledge-Attitude-Belief (KAP) theory, “knowledge is the basis of behavior change and belief and attitude are the driving forces of behavior change”

(p.1). In this regard, they posit that public perception of dealing with highly infectious respiratory diseases play a vital role in controlling its spread.

It is because of this that this research seeks to know how the public perceive the corona virus disease, in terms of their level of knowledge of the disease as well as their misconceptions about it. Again, the research intends to assess some of the attitudes and practices of the public emanating from both their cultural and religious beliefs and how these attitudes and practices will either help limit the spread or otherwise.

Ascertaining the knowledge, attitude, and beliefs of the public regarding the corona virus will help public health authorities to better plan their educational campaigns to address the spread of the virus and, will equip the health ministry to better deal with the virus.

1.3 Research Questions

1. What is the knowledge relating to COVID-19 among taxi drivers?
2. What are the practices relating to COVID-19 among taxi drivers?
3. What are the sources of information on COVID-19 among taxi drivers?

1.4 Research Objectives

1.4.1 General Objective:

To assess the knowledge and practices relating to COVID-19 among taxi drivers.

1.4.2 Specific Objectives:

1. To explore the knowledge relating to COVID-19 among taxi drivers at the Kotoka.
2. To identify the practices relating to COVID-19 among taxi drivers at the Kotoka.
3. To identify the sources of COVID-19 information among taxi drivers at the Kotoka.

1.5 Justification for the study

Ghana's health system faces a lot of challenges, some of which include inadequate number of trained personnel, inadequate number of specialized equipment and infrastructure as well as, lack of adequate funding. There have been reports of COVID-19 designated centers being full and patients being treated at 'general' facilities while others are encouraged to stay at home and call the Ghana Health Service (GHS) for guidelines on managing the condition. It is therefore important that preventive measures are put in place to curb the importation and community spread of the disease.

Accra is the capital city of Ghana and has the only international airport in the country, the Kotoka International Airport.

Since the country recorded its first cases (imported) in March 2020, a lot of measures were put in place including the closure of all borders (land) and regulated air travel. The airport has been in operation and people have been coming into the capital as well as going out from and to other parts of the world. Measures such as testing for COVID-19 before arriving in the country and getting tested at the airport upon arrival have been put in place.

The airport has a taxi rank within its premises where vehicles commute travelers from the airport to other parts of the city. The drivers at this taxi rank are in constant contact with travelers. Exploring the knowledge and practices of community members (taxi drivers) on COVID-19 is important to find out their understanding of the current disease situation and what practices may contribute to spreading the disease. Also, this will help to get information which can explain how people react to disease outbreaks. Information gathered can also be helpful for healthcare providers to prepare for any possible surges in cases, as well as for policy makers to institute

regulations or strategies or plans to help manage the situation in Ghana. This study will also add to existing literature on community members' knowledge of COVID-19.



1.6 Conceptual Framework: Community knowledge, attitudes and practices relating to Covid-19 among Taxi Drivers in La Dade-Kotopon District

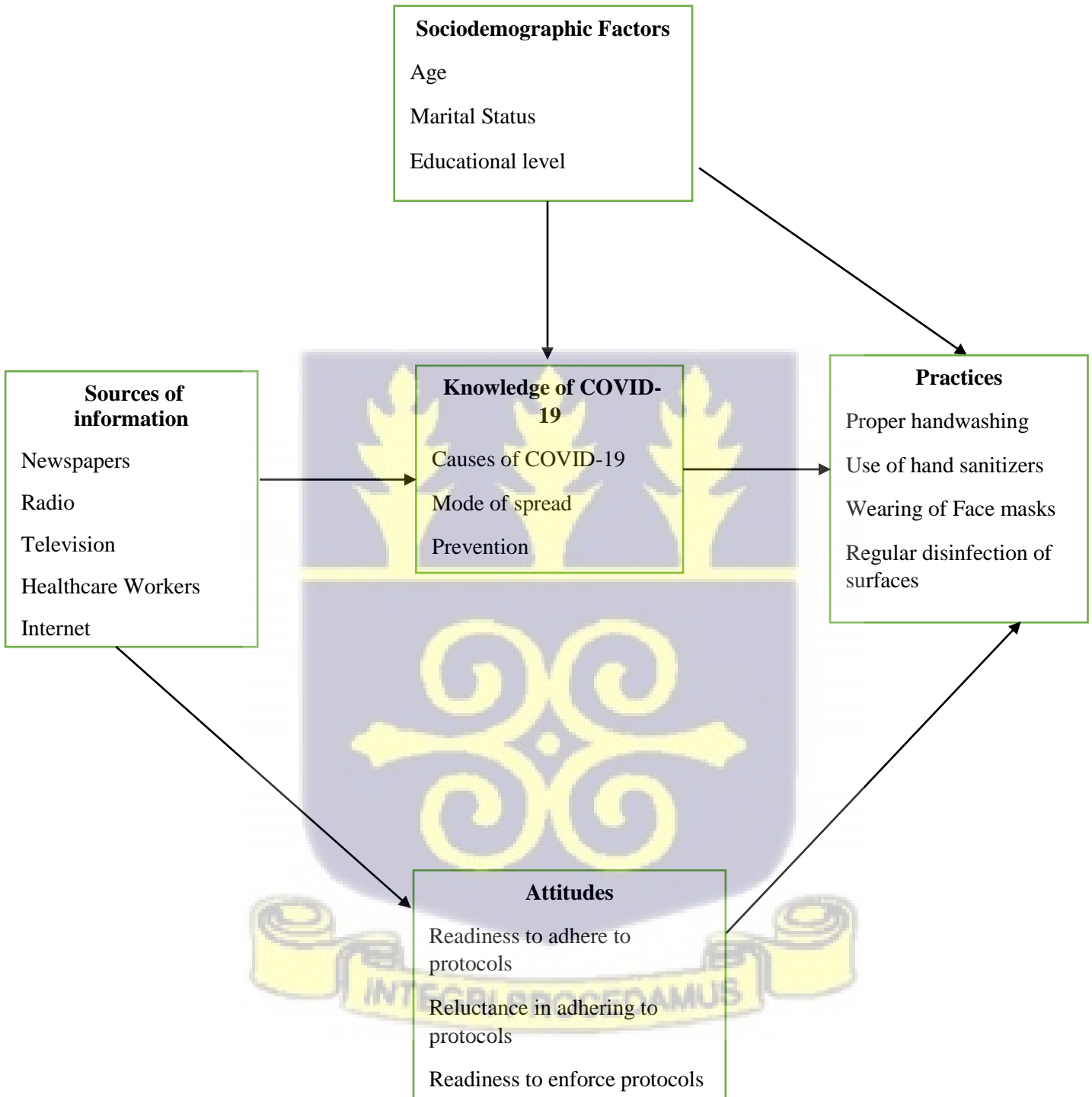


Figure 1: Conceptual Framework

1.6.1 Narrative for Conceptual Framework

The conceptual framework (designed by the researcher) depicts the interaction of the factors that influence a situation or action. The framework is informed by the Health Belief Model (HBM) which was developed in the 1950s to help understand why people fail to adopt strategies that prevent diseases, in this case Covid-19. According to the model, an individual's action depends on their perception of the benefits as well as the barriers to a health behavior. The six constructs of the Health Belief Model are:

Perceived susceptibility: an individual's perception of their own risk of acquiring a disease such as Covid-19. Knowledge of the cause, mode of spread and prevention of Covid-19 can influence an individual's perception of their risk of getting infected with the disease. Taxi drivers who do not believe, based on their level of knowledge, that Covid-19 can affect everyone are not likely to adhere to protocols. The knowledge of community members on the laid-out protocols can be influenced by factors such as sociodemographic and the sources of information, as well as misconceptions about the disease.

Perceived severity: the individual's perception of the severity or consequences of having the disease informs their decision to adopt behavior change. Having knowledge of the outcomes of contracting Covid-19 such as hospitalization and even death can inform the taxi drivers readiness (attitudes) to adhere to preventive protocols. Socio demographic factors such as a person's age, marital and educational status may affect community members' reception of information which can influence their perceived severity of the disease.

Perceived benefits: the individual's perception of what they stand to gain from adopting a behavior. An individual may not want to adopt a new behavior, such as frequent proper hand hygiene if they do not have good knowledge and understanding of how that behavior change will

benefit them. In this case, the benefit of adopting preventive protocols may include protecting elderly family members from contacting the disease. The perceived benefits influence people's attitudes.

Perceived barriers: an individual's perception of things or situations that may prevent them from adopting a behavior. A person may not want to adopt a behavior because of the possible difficulty or discomfort it is likely to cause them. A typical Ghanaian may find social distancing difficult because of the communal nature of our customs and traditions. Social distancing will mean no handshaking, hugging or communal meetings such as funerals which forms a major part of the society's sense of togetherness.

Cues to action: the stimulus that has the potential to get the individual to adopt a behavior. Some cues to action that have been used to ensure adherence to Covid-19 protocols have been various advertisements of the disease and its consequences and announcements of the statistics, as well as the presidential addresses. These cues inform people's practices.

Self-efficacy: an individual's confidence in their ability to sustain an adopted behavior (Janz & Becker, 1984; Rosenstock, 1974).

Accurate information of Covid-19 equips an individual to decide to adhere to Covid-19 protocols and in turn help to slow down the spread of the disease. One may be able to be more responsible for their own and significant others' wellbeing.

To curb the spread of COVID-19, it is important to consider the interplay of knowledge, attitudes, and practices against the backdrop of the constructs of the Health Belief Model.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents a review of relevant literature on COVID-19. It first examines the current state of the COVID-19 pandemic, in terms of the global outlook of the disease; what it is and what measures have been put in place to contain it. It also focuses on the African situation regarding the pandemic, as well as the epidemiology of the disease and the manufacturing of vaccines and vaccination. It also looks at the effects of the virus on lives and health systems of the world. Another focus of this chapter is to examine the knowledge, attitudes and beliefs of people concerning the disease.

2.1 COVID-19 Situation

2.1.1 Global

Coronavirus disease 19, (COVID-19) is a highly infectious viral infection caused by the newly discovered severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), (WHO, 2020). The disease is reported to have started in Wuhan, China, where it is suspected to have started from human contact with animal hosts of the virus and later spread through human-to-human contact (Shereen et al., 2020). The disease was declared a pandemic by the WHO in March 2020. Umakanthan et al., (2020) indicate that the pandemic in a short period has affected a lot of people worldwide causing a lot of deaths leading to a widespread mobilization of medical resources all over the globe. They also point out that the containment of the disease will require collaborations. The WHO has spearheaded the global fight against the novel coronavirus. They have dedicated a section of their website to provide useful information on the disease which includes statistics on infections and deaths, advice to the public, technical guidance on situation reports, as well as research on the disease (WHO, 2021).

The signs and symptoms of the disease include but are not limited to fever, headaches, muscle pains, shortness of breath, fatigue, loss of taste and smell, nasal congestion, sore throat (CDC, 2021) The symptoms of COVID-19 are like those of other viral infections like common cold. Therefore, more conclusive tests like viral or antibody tests which require taking nasal or mid-turbinal swabs to the laboratory for testing are done (CDC, 2021).

COVID-19 has had many differing effects on individuals, countries, and the world. Carter et al., (2020) identify that COVID-19 has created issues with capacity which will affect quality of care. They believe that there is likelihood of patients with cardiovascular disease to be vulnerable to complications due to rationing of access to critical care services. Thus, more attention will be shifted to the management of COVID-19 cases to the detriment of patients with already existing conditions such as cardiovascular disease. There have been also reports of hospitals and healthcare centers being overwhelmed with patients who need intensive care. In this regard, it will affect the treatment of other sicknesses and overburden health workers which will essentially affect the quality of care.

Moreover, not only has COVID-19 affected the health systems the world over, but the psychological effects of the mitigation measures such as quarantine can lead to anxiety obsessive disorders, as well as post-traumatic stress disorder (PTSD) in the long run (Dubey et al., 2020). Societies are built on interrelatedness and interconnectedness. With the upsurge of the disease, many aspects of society such as commerce, education, religious activities, and other social activities have had to shut down completely or suspended. Arguably, these measures are in the public health interest, but as Dubey et al., (2020) suggest, they have the tendency to create long term effects on individuals including anxiety disorders and post-traumatic stress disorders. The effects of the pandemic will not only affect health care systems, but also, they have a toll on

economic activities as well. Again, since the emergence of the disease, the livelihood of people around the world has been altered due to measures such as lockdowns (Groeniger et al., 2021). These have brought untold hardships on people and businesses.

The WHO on November 26, 2021, labelled the new variant B.1.1.529 a concern and named it Omicron. The labelling was based on the advice of the Technical Advisory Group on Virus Evolution and was primarily hinged on the presentation made to the TAG-VE to the effect that Omicron variant has numerous mutations which may impact on how the virus behaves in terms of its spread and or the sternness of illness Omicron causes. Currently, researchers (worldwide and in South Africa) are undertaking studies to facilitate the understanding of the facets of Omicron. It has however been noted that with reference to transmissibility, no clear-cut insight has been obtained and no succinct knowledge has been acquired on its ability to spread from infected person to the other in comparison with sister variants such as Delta. In consideration of Omicron's severity, no path in terms of understanding has been obtained as to whether it causes more severe diseases compared to the infections posed by other variants such as Delta. It has however been established by the WHO (n.d.) that the rates of increase in hospitalization in South Africa is quite alarming though it has not been established that the increase in hospital cases is due specifically to Omicron. It is also quite interesting to note, that the symptoms posed by Omicron are no different from that posed by the other variant of COVID-19. By virtue of the ambiguity in information gathered so far and the fact that symptoms of Omicron is similar to other variants which are more deadly, it better to put on prevention guards and help keep the individual from harm's way.

2.1.2 Africa

Since the declaration of the COVID-19 pandemic by the WHO Director General on 11th March 2020, Africa has had its own share of the negative impacts of the disease. The first case of COVID-19 in Africa was recorded in Egypt on 14th February 2020 and has since spread to 52 countries through imported cases from Asia and other parts of the world (WHO, 2020). Countries worst hit by the COVID-19 on the African continent include South Africa, Nigeria, Ghana, Egypt (Lukman et al., 2020). Africa is plagued with issues of weak health systems and inadequate financing.

Despite the predictions of the WHO, Africa seems to have lesser case counts of COVID- 19. This notwithstanding, Africa's already weak health systems and inadequate proportion of health workers to population, as well as shortage of medical supplies already pose a major risk to the containment of the disease in the event of a serious upsurge in cases (Ozili, 2020). The pandemic therefore will overburden the already ailing healthcare industry in Africa and affect the treatment of high priority diseases such as HIV, tuberculosis, and malaria in sub-Saharan Africa (Godman et al., 2020; Thornton 2020, as cited in Afriyie et al., 2020).

The WHO through its Regional Office for Africa, has outlined the various responses that have been made in the face of COVID-19 across the African continent. According to The WHO African Regional office, the responses on the continent include training and guidance for the provision of essential services, improving COVID-19 infection prevention and control in health facilities, partnering with international agencies such as The United Nations Children's Fund (UNICEF) and Non-Governmental Organizations (NGOs) to coordinate risk communications in various countries.

Lockdowns were imposed in various parts of Africa with the announcement of pandemic by the WHO. Haider et al., (2020) defines lockdown as “a set of measures aimed at reducing transmission of COVID-19 that are mandatory, applied indiscriminately to a general population and involve some restrictions on the established pattern of social and economic life.” In their study of nine Sub Sahara African countries, Haider et al. (2020) found that these nine countries (Ghana, Nigeria, Sierra Leone, South Africa, Sudan, Tanzania, Uganda, Zambia and Zimbabwe) implemented different variations of lockdowns at different times grouped into three as geographic containment which involves limiting or controlling movement in areas of high case count, home confinement or curfews which requires people to stay at home for certain amounts of time, and finally prohibiting gatherings such as funerals, religious gatherings as well as closing of premises such as schools.

Contact tracing is another containment measure that was widely employed in Africa in the fight against Covid-19 during the early days of the pandemic on the continent. Nachege et al. (2021) reports on the activities of contact tracers from four countries in Africa; Nigeria, Rwanda, South Africa, and Uganda.

2.1.3 Ghana

The first two cases of COVID-19 were confirmed on 12th March 2020 by the Minister of Health and since then the country has recorded over 90,000 cases. These two cases were imported cases from Norway and Turkey. Measures put in place by the government to help deal with the disease included lockdowns of some parts of Accra and Kumasi. The nation’s borders were closed except for the airport with regulations put in place to ensure testing. People arriving in the country were made to undergo compulsory quarantine for 14 days during which tests were done to be sure they did not have the virus before they could join their families (Lake, 2020).

The Ghana Health Service and Ministry of Health and Information have since been giving updates on the state of the disease in the country. Guidelines have been put across for various activities such as handwashing, wearing of face masks, social distancing. Ghana has seen some innovation in handling the COVID-19 situation, such as the pool testing technique for diagnosing the disease, use of drones to help with transportation of blood samples and personal protective equipment as well as local production of personal protective equipment and face masks.

In their research, Afriyie et al., (2020) explore the challenges, experiences, and opportunities of COVID-19 in Ghana. They state that COVID-19 in a poor resource nation like Ghana is challenging owing to the inadequate health facilities as well as health workers. Again, they enumerate the commendable steps by the government to help fight the pandemic which include lockdown of Greater Accra and Ashanti Regions during the early phase of the disease, mandatory quarantine for travelers, enhanced testing and contact tracing, weekly updates on the COVID-19 situation locally and globally and the safety protocols put in place. They further state that despite the devastating effects of the pandemic on lives and livelihoods, the pandemic has created some opportunities for Ghana and other Low- and Middle-Income Countries (LMICs). In Ghana, they show how due to the shortages of PPEs and hand sanitizers, there have been efforts spearheaded by the government and private individuals to locally manufacture PPEs and sanitizers to help boost the efforts against the fight of the virus. Again, they mention a notable feat achieved by Scientist at the University of Ghana Noguchi Memorial Institute for Medical Research and the West African Centre for Cell Biology of Infectious Pathogens with support from the University of Ghana Computing Systems who together have successfully sequenced the genomes of SARS-CoV-2 from 15 samples obtained from confirmed cases in Ghana.

2.2 Epidemiology

COVID-19 is caused by the SARS-CoV-2, a newly discovered coronavirus. The disease typically affects the respiratory systems of individuals and causes symptoms that are like those of influenza. According to Afriyie et al., (2020), a survey done from large cohorts of patient found out that the disease presents as “self-limiting in approximately 80% of infected individuals with 15% developing severe pneumonia and mortality estimated at 35%” (p. 6). Again, individuals with underlying health conditions and the aged were found to be more susceptible to the infection and have higher chances of severe outcomes.

Moreover, COVID-19 is reported to occur across age groups, with the severity of the infection classified as asymptomatic, which is showing no clinical symptoms despite testing positive for the virus. Patients who reach the critical stages of the disease get into acute respiratory distress and possible multiple organ dysfunction (MoH, 2020).

Currently, there are over 150, 000,000 confirmed cases of COVID-19 with more than 3,000,000 deaths worldwide. Among the most affected countries are USA, India, Brazil, France, Turkey, and Russia. The statistic for Africa stands at over 3,000,000 confirmed cases with over 82,000 deaths across 47 countries (WHO, 2021). The situation in Ghana follows a similar trend of increasing number of confirmed cases, currently at over 92,000 and over 700 deaths. Out of the number of confirmed cases, over 1500 are active cases (GHS, 2021). These statistics show a rapid rise in the number of affected persons and increased deaths worldwide. It is therefore expedient for more education to be carried out to help the message of the presence of the virus to resonate more with the citizens, especially in LMICs such as Ghana, to avoid an overwhelming number of affected cases which will jeopardize the already weak health systems in the nation. It

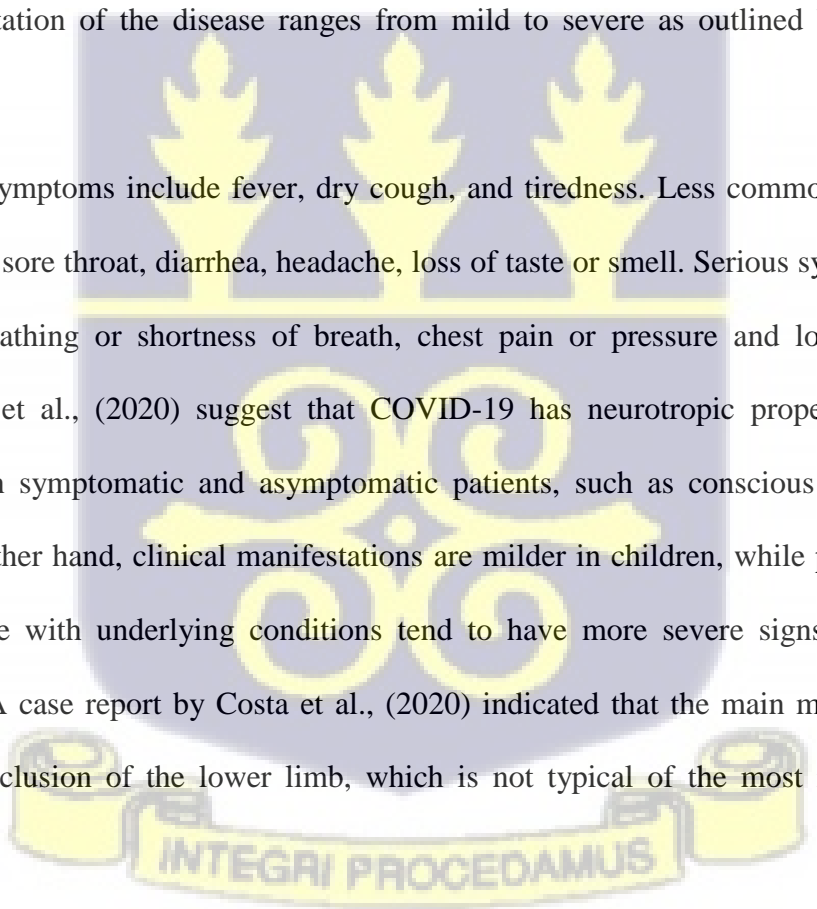
is in this regard that this research seeks to find out the knowledge, attitudes, and practices of community folks on the Corona virus pandemic.

A study conducted by Li et al., (2020) suggests that the mean incubation period for the virus in ten people who tested positive for the disease is 5.2 days, while the mean duration from the start to being admitted on hospital was about 12.5days among 44 patients.

2.3 Clinical Manifestation

People are affected differently by the COVID-19. Some people are reported to show no symptoms of the diseases and referred to as asymptomatic (Gao et al., 2021). However, the clinical manifestation of the disease ranges from mild to severe as outlined by the WHO as follows:

Most common symptoms include fever, dry cough, and tiredness. Less common symptoms are aches and pains, sore throat, diarrhea, headache, loss of taste or smell. Serious symptoms such as difficulty in breathing or shortness of breath, chest pain or pressure and loss of speech or movement. Baj et al., (2020) suggest that COVID-19 has neurotropic properties which can manifest in both symptomatic and asymptomatic patients, such as conscious skeletal muscle injury. On the other hand, clinical manifestations are milder in children, while pregnant women and older people with underlying conditions tend to have more severe signs and symptoms (WHO, 2020). A case report by Costa et al., (2020) indicated that the main manifestation was acute arterial occlusion of the lower limb, which is not typical of the most reported clinical manifestations.



2.4 Vaccine Development and Administration

According to the CDC, vaccine development is in stages, exploratory stage, pre-clinical stage, clinical development, regulatory review and approval, manufacturing, and quality control. The clinical development stage has three phases, phase one is the trial phase where a small group of people are given the vaccine. In phase two, the vaccines are given to aged or people with underlying health conditions, and in phase three, the vaccine is given to a larger population.

Since the announcement of the COVID-19 pandemic in March 2020, there have been various actions spearheaded by the WHO to find a way to curb the disease. One of such actions is the activation of a Research and Development Blueprint to accelerate the development of vaccines for COVID-19. A group of experts under the coordination of the WHO came together to work towards the development of a vaccine for the disease in February 2020. The goal of vaccination in outbreaks such as COVID-19 is to reach herd immunity. Due to the nature of the pandemic, the WHO procedure for emergency use listing of vaccines was activated (WHO, 2020a). This was to facilitate the development of the vaccines to help contain the disease. With the development of COVID-19 vaccines, COVAX was formed to be the body that regulates the vaccines and ensures fair distribution to different parts of the world (WHO, 2020).

The COVID-19 pandemic has brought a lot of changes to the daily livelihood of people across the world, and for things to go back to how they were before the pandemic, it is believed that vaccines will help effectively (Ye et al., 2020). It is on this basis that the WHO and governments as well as giant pharmaceutical companies are working tirelessly to bring a vaccine to help curtail the spread.

Ghana received her first batch of COVID-19 vaccines through the COVAX facility in March 2021. Before the arrival of the vaccines in Ghana public education was done to announce the roll

out of the vaccination process. Health workers and adults with underlying diseases were among the first batch of people who were slated to take the first doses of then vaccine. Since the introduction of the vaccines, various sections of the populace have received doses of vaccines from Astra Zeneca, Pfizer, Moderna as well as Johnson and Johnson. There is current drive for people to take booster doses of the vaccines, all in the bid to increase herd immunity and help in the fight against the disease.

2.5 Knowledge about COVID-19

The WHO updates on COVID-19 indicate that the disease is still spreading with daily increase in statistical figures. Various studies have been conducted in various countries about the knowledge on COVID-19. A study among a group of Syrians showed that those of a relatively high level of socioeconomic status have good knowledge of COVID-19 (Labban et al., 2020). According to their study also, high levels of education was associated with correctly answering questions on COVID-19. Furthermore, an online cross-sectional survey conducted in Sudan found that participants had good knowledge of COVID-19 with positive attitudes. The same study also found that education is positively associated with knowledge and good knowledge level also was associated with good practice (Sayedahmed et al., 2020). Another study done in Pakistan among university students showed that low knowledge score is associated with socially unacceptable practices such as failure to wear face masks and being in crowded places (Iqbal & Younas, 2021).

Adesegun et al. (2020) in a study conducted on knowledge, attitudes, and practices in Nigeria, found that most respondents were knowledgeable about the signs and symptoms of COVID-19. The participants of the study were educated people who could read and understand English. Their sources of COVID-19 information were mainly from social media. Adesegun et al., (2020)

from their study also noted that a greater proportion of their participants stated that COVID-19 exists and stated that they would interact with persons recovered from the disease. However, with regards to practices, a smaller percentage of participants (22.5%) indicated that they wore face masks when leaving their homes, while about 90% of respondents indicated that they washed their hands twice a day.

Furthermore, a study conducted among senior high school students in the Bawku Municipality in Ghana found that about 99% of the participants of the participants had knowledge of the symptoms of COVID-19 with about 78% being able to identify the symptoms (Lettor et al., 2020). These findings may be applicable to students from other institutions; however, they may not be generalizable to people who are not students.

Bonful et al., (2020) made the following observations after studying 45 transportations stations in Ghana; 82% of the stations did not provide any printed information on proper hand hygiene practice, 84% had installed handwashing facility out of which 5% were not using the installed facilities. 5% of the stations provided communication on social distancing.

2.6 Misconceptions

Though there is widespread education on the COVID-19 through the WHO and governments the world over, there still exists misconceptions about the disease. The misconceptions range from people still believing the virus does not exist and it is only myth. Others believe the disease is not for the black race or countries in the tropics while others still believe it is a disease for the rich.

A study to assess the health perception and misconceptions regarding COVID-19 in China by Zhou et al., (2020) indicates that despite the great efforts to prevent the spread of the coronavirus through national and global initiatives, there are still misunderstandings about the disease. They

state that the misunderstandings stem from the underestimation of the disease, panic, and the ineffective measures of individuals to prevent the disease. Using an online study survey of 7118 participants, they found out that the source of information of participants is linked to whether they are misled or not. Those who sought information through the mainstream media like the televisions and experts had adequate information on the disease. Social media was found to be the most misleading source in the study.

Adom (2020) in a study to ascertain the cultural and educational implications of the COVID-19 in Ghana found out that the myths and misinformation on the infection and prevention of the disease are shrouded in the cultural beliefs of Ghanaians. He argues that the religious beliefs, culture-led medicinal belief, and practices are contributing to the myths and misinformation on the spread of the infection. He mentions some religious leaders are advising their congregants not to adhere to the safety protocols as they are a form of persecution. He argues that ignoring the cultural dimensions to healthcare during a pandemic has always proved fatal. It is essential therefore to leave religious beliefs, culture-led medicinal beliefs unaddressed in the fight against the virus. He found out among the study participants that a lot of them hold the belief that the black genes is immune to the infection. Again, it is a question of faith as God protects his own.

In another study, Tabong and Segtub (2021) found several myths and misconceptions held by some Ghanaians about the COVID-19 pandemic. According to their study, some Ghanaians believe that persons of the black race have a degree of immunity against COVID-19. Another misconception discovered by this study was that the COVID-19 virus cannot survive for a long time in a hot climate zone. Among other findings, the results also indicate that some people hold the belief that herbal remedies are effective in managing the disease. These findings were

obtained from a review of social media information on COVID-19 as well as interviews with key stakeholders.

These misconceptions and misinformation tend to increase the spread of the disease and overwhelm the already weak health system in a country like Ghana. It is therefore expedient this study assesses the level of knowledge, attitudes, and practices on the coronavirus in a bid to strategize the education campaigns for optimum results.

There are people who believe that hand sanitizers kill the virus while some also believe that hand dryers help prevent or control the virus (Okunlola et al., 2020). Some of the participants of this study also held the perception that face masks should be worn by healthcare workers only. It may not be clear without researching if people in Ghana are of the same view.

There has also been widespread idea that low-income countries are more immune to COVID-19. However, this is a misconception that needs to be dispelled to prevent low-income countries from holding on to a false sense of security (Roy, 2020). According to Roy (2020) case fatality ratio should be taken as a more significant comparison than just the number of cases that are recorded in high-income against low-income countries.

2.7 Prevention and Containment

The WHO has outlined protocols for prevention and containment of the disease which include washing of hands regularly with soap under running water or clean with alcohol-based hand rub (in the absence of water), maintaining at least 1 meter distance between 2 people, avoid touching the face, wearing face masks, cover the mouth and nose when sneezing and avoiding crow (WHO, 2020b).

Some countries such as the Netherlands resorted to lockdowns to help with containment of the disease, with regulations on private and public gatherings, people were advised to work from home as much as possible, as well as limitation on visits to elderly people (Groeniger et al., 2021). China also implemented lockdowns to help in the containment of the disease (Paital et al., 2020). South Africa and Ghana also implemented lockdowns at various times to help with the containment of COVID-19 (Durizzo et al., 2021).

Quarantine is another measure being applied to prevent and contain the disease. This involves restricting activities and separating people who may be exposed to the infection but are not ill, in order to monitor them for early detection of disease if it arises (Güner et al., 2020).

In Ghana, there have been series of addresses by the president announcing the implementation of these measures (GHS, 2020). Travelers who use the airport are required to present negative COVID-19 results obtained up to 72 hours before arrival in the country and testing is also done at the airport. People who test positive at the airport are escorted to designated facilities to be quarantined. These measures have been strictly ensured.

2.8 COVID-19 and Ebola Response in Ghana

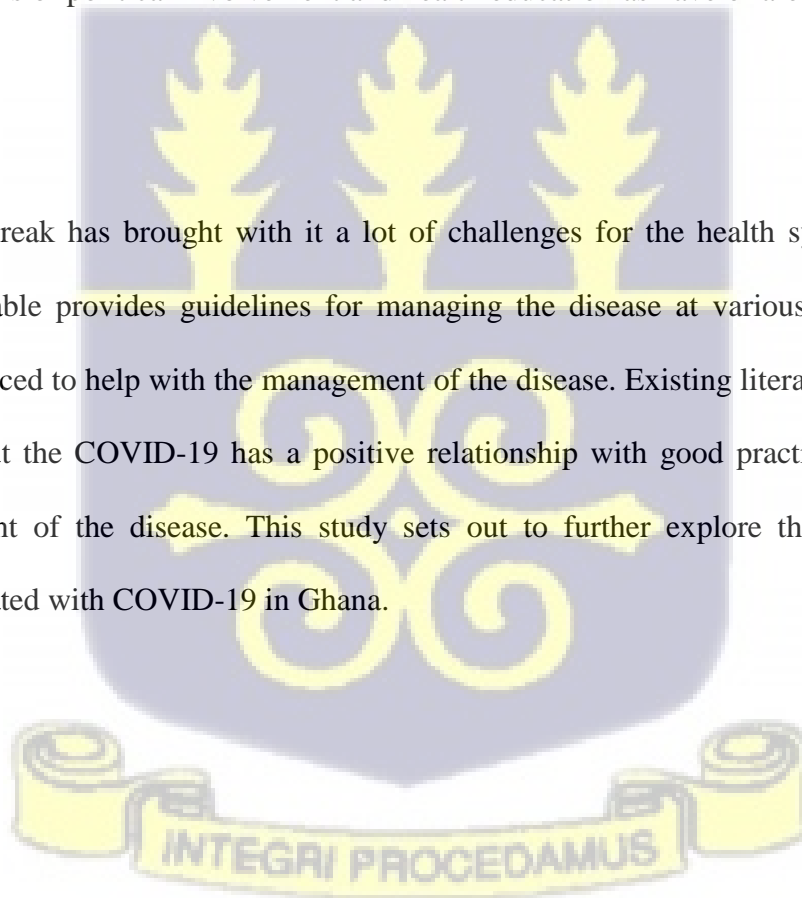
The COVID-19 pandemic brought to light several public health issues just as in the time of Ebola virus disease (EVD) outbreak between 2013-2016. At the time of the EVD outbreak, public education and awareness creation on the disease, signs, and symptoms as well as prevention using various media and platforms, were among the measures put in place in preparedness for any possible cases in Ghana even though no cases were recorded in Ghana. This is similar to the measures that were put in place before the first cases of COVID-19 were identified in the country. According to Tenkorang (2018), “health education and social mobilization towards Ebola prevention in Ghana was intense”.

The setting up of designated treatment centers for positive COVID-19 cases was among the measures put in place for the management of the situation. These treatment centers were equipped with necessary equipment as well as staff who were trained to take care of people who came down with the disease. As with the COVID-19 response, three treatment centers were set up to manage Ebola cases if any were detected (Oleribe et al., 2015). The same study highlighted the institution of incentives and insurance packages for frontline healthcare workers, which is similar to what happened in the heat of the pandemic in Ghana.

It has been evident from literature on Ebola virus disease on Ghana that there have been similar responses in terms of political involvement and health education as have or are still ongoing with COVID-19.

2.9 Conclusion

COVID-19 outbreak has brought with it a lot of challenges for the health system worldwide. Literature available provides guidelines for managing the disease at various levels. Vaccines have been produced to help with the management of the disease. Existing literature indicates that knowledge about the COVID-19 has a positive relationship with good practices that can help with containment of the disease. This study sets out to further explore the knowledge and practices associated with COVID-19 in Ghana.



CHAPTER THREE

METHODOLOGY

This chapter outlines the various methods and tools that were used in gathering data from respondents. The section also describes the type of study, the study setting, sampling technique, data analysis tools that will be used to analyze data collected, target population.

3.1 Research Design

A descriptive qualitative research design was used for this study. The choice of this design was because qualitative research is an in-depth comprehensive examination of human phenomena through the collection of rich descriptive data and its subsequent analysis (Polit & Beck, 2010). Also, according to Denzin and Lincoln (2011), the use of qualitative research helps in understanding and describing the meanings people give to their lived experiences.

This approach was chosen in accordance with Creswell (2009) who described qualitative research as a well-grounded process of investigation that can be used to comprehend a social or human issue by constructing a comprehensive picture of the situation, using words rather than figures, while engaging participants in a natural setting.

3.2 Research Setting/Area

The study was conducted in the La Dade-Kotopon District, at the Kotoka International Airport. La Dade-Kotopon District (La Dade-Kotopon Municipal Assembly) was established in June 2012 out of the Accra Metropolitan Assembly. The capital of the district is La. The district covers an area of 360sq km and is located on Longitude 05o 35'N and on Latitude 00o 06W. It is bounded by the Accra Metropolitan Assembly, the Ledzokuku Krowor Municipal Assembly, and the Gulf of Guinea.

Kotoka International Airport is the only international airport in Ghana, situated in the national capital Accra. KIA was used by the military in 1946 before it was restructured in 1956 to handle the demand for air travel. Initially designed to accommodate about 500,000 passengers annually, the airport has grown to a capacity of about 2.8million passengers in 2019.

The airport is located northeast of Accra and connected to highways leading to other major parts of the capital. The airport has co-ordinate points 05° 35' 47" North Latitude by 000° 10' 12" West Longitude and is located on the Greenwich Meridian.

The taxi rank is located on the land of the airport and is open to the public who are arriving in the country as well as workers of the airport who need to be conveyed to various destinations. The taxi drivers have a union and a uniform to help identify members. These drivers ferry people to and from the airport.

Since the first cases of COVID-19 were recorded in March 2020, the president of Ghana has given periodic updates on measures taken to help fight the disease in the country. One of such measures included closure of the nation's borders with suspension of international flights. The airport was therefore closed temporarily and opened in September 2020, after various protocols such as testing on arrival had been put in place (MoH / GHS, 2020).

The opening of the airport meant that the taxi drivers who ply the airport from various parts of the capital resumed their activities of transporting people to and from the airport.

3.3 Research Population

Polit and Beck (2010) define population as “all individuals or objects with common defining characteristics that meet a set of criteria for inclusion in a study”. The target population for this

study was taxi drivers, members of the taxicab operators union who were willing and available to participate in the study.

3.4 Themes Explored

The themes explored were:

Knowledge, attitudes, and perceptions relating to COVID-19,

Practices relating to COVID-19 and

Sources of information relating to COVID-19.

3.5 Sampling Technique

According to Polit and Beck (2010) purposive sampling requires selecting individuals who are typical of the population. Purposive and convenience sampling techniques were used to select participants for the study. The use of convenience sampling is to select people who are most readily available (Polit & Beck, 2010). Saturation is reached in qualitative research when no new theme or subtheme emerges, and the researcher does not receive any new ideas after interviewing participants repeatedly. In this study saturation was attained after the fifteenth(15th) participant was interviewed.

3.6 Participants Selection

Drivers who are known members of the Airport Taxicab operator's union were allowed to be part of the study. This is because people from different parts of the world get into the country through the Kotoka International Airport and these drivers are at risk of contracting the virus if proper protocols are not ensured.

These drivers were identified by the uniform they wear. The drivers who granted permission to answer questions and be voice recorded while sharing their experiences were selected for the study. The population of drivers belonging to the taxicab union is sixty (60). Fifteen (15) of them were selected to participate in the study.

3.7 Data Collection Technique

In-depth interviews were conducted by the researcher. These interviews were audio-taped, and notes taken in a field notebook. The sessions lasted about 30 minutes on average. The researcher after seeking permission from the chairman of the taxicab operators union, was introduced to the other drivers by the chairman. That helped to establish some level of rapport with the drivers. The researcher verbally described the study's goals to participants before any interview. Information sheets (see appendix A) and consent forms (see appendix B) were also verbally explained in Twi/Ewe to the participants as well. The interviews were conducted in the Twi/Ewe language to ensure easy communication between the researcher and the participants.

One research assistant helped with the tape recordings and note taking.

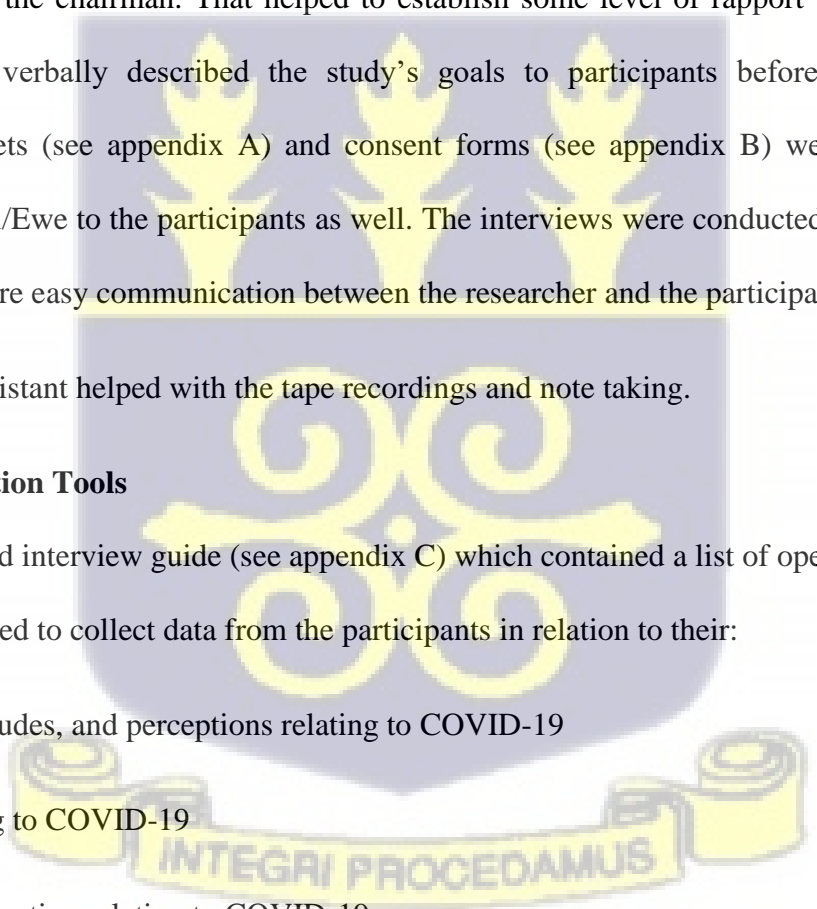
3.8 Data Collection Tools

A semi-structured interview guide (see appendix C) which contained a list of open-ended questions was used to collect data from the participants in relation to their:

Knowledge, attitudes, and perceptions relating to COVID-19

Practices relating to COVID-19

Sources of information relating to COVID-19



The open-ended questions asked were balanced, unbiased, clear, and sensitive (Whitehead & Lopez, 2016).

3.9 Quality Control

A research assistant was recruited and trained to help with note taking and recording of discussions. To ensure understanding, the researcher asked the assistant questions bordering on the training and evaluated the answers. Again, in order to ensure that participants are not distracted, the researcher interviewed drivers who were at any given point in time at the bottom of their queue list and were not moving around during the administration of the questionnaire. Such drivers were more relaxed and ready to talk than those who were at the top of the list. This is affirmed by Davies (2007), which indicates that interviews should be conducted in settings that are relaxed and familiar to participants.

The researcher also ensured that tape recordings had good quality, by holding the interviews under some trees away from the bustling noise from other drivers were trying to get passengers. The recordings and field notes taken from the interviews were kept confidential and destroyed after the audio-taped data were transcribed.

3.10 Data processing and analysis

The audio recorded information obtained during the interviews transcribed. Transcription involves the process of converting speech in an audio or visual file into written texts. This was the first step in the data analysis process. Davidson (2006) asserts that transcription involves judgments about the level of information to choose. The researcher, in the process of transcribing translated the Twi language into English. The researcher also tried as much as possible to ensure that words that were difficult to directly translate into the English language were approximated to the nearest words in meaning.

The findings of the study were analyzed using thematic analysis as recommended by Braun and Clarke (2006). Braun et al., (2006) recommended six steps that should be followed in data analysis: the first step involves becoming familiar with the data, then generate initial codes, thirdly, search for themes, then review the themes, define the themes and finally, write-up.

Based on these recommended steps of analyzing data, the researcher, having transcribed the data, thoroughly read through the information to find out whether the responses really reflected the subject matter in question (familiarization). Having ascertained that, the researcher then organized the information and later initiated a coding process with words and short phrases (generate initial codes). Three major themes were obtained from the data based on the research objectives and sub-themes were obtained from the field data (search for themes, review themes and define themes). After these processes were successfully completed, the researcher proceeded to draft the analysis.

3.11 Limitations

The major limitation to the study was the interest of the participants. Some of the drivers did not show much interest because they claimed they were tired of hearing about COVID-19. However, after explanation from the researcher on the importance of the study, they were willing to participate.

3.12 Inclusion Criteria

The following were the inclusion criteria: (a) Taxicab drivers who had been members of the taxicab operators union for more than six months; (b) Taxicab drivers who could speak English, Twi or Ewe; (c) Taxicab drivers who were willing and gave their consent to participate in the study.

3.13 Exclusion Criteria

Taxicab drivers who were not members of the operators union at the Kotoko International Airport were not eligible. Members of the union who were not present at the airport for some reason were not eligible.

3.14 Pretesting

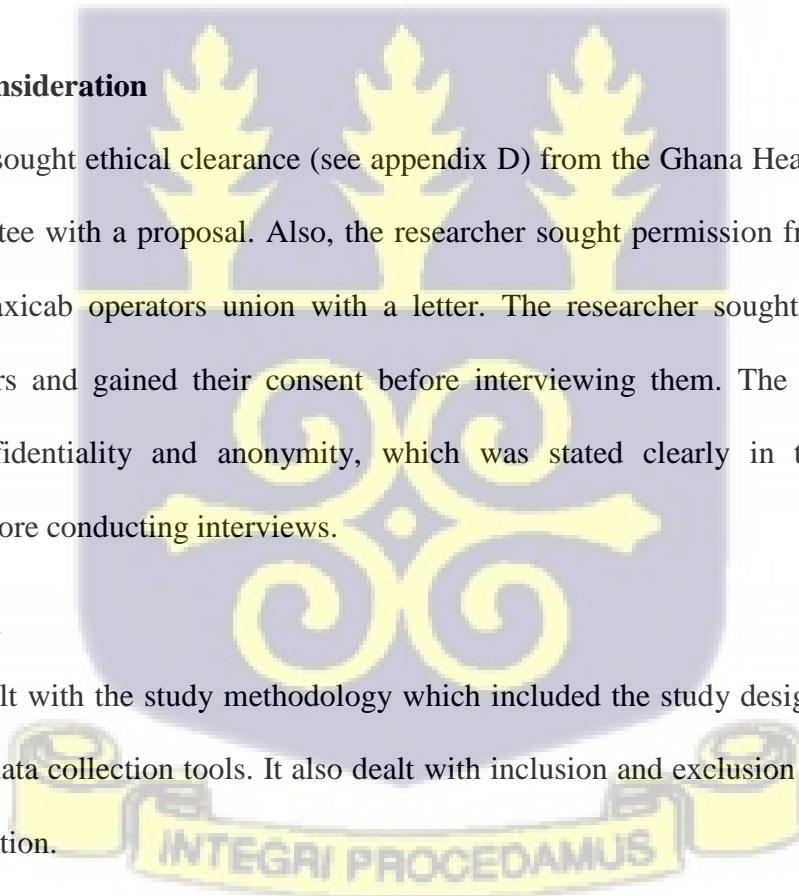
A pilot study was carried out at the Okponglo taxi rank on the University of Ghana campus. The same study instruments were used. Two (2) drivers at the taxi rank were interviewed. The pilot helped the researcher to identify possible problems, and these were corrected before the main study.

3.15 Ethical Consideration

The researcher sought ethical clearance (see appendix D) from the Ghana Health Service Ethics Review Committee with a proposal. Also, the researcher sought permission from the Chairman of the airport taxicab operators union with a letter. The researcher sought permission from individual drivers and gained their consent before interviewing them. The respondents were assured of confidentiality and anonymity, which was stated clearly in the consent form administered before conducting interviews.

3.16 Conclusion

This chapter dealt with the study methodology which included the study design, area, sampling techniques and data collection tools. It also dealt with inclusion and exclusion criteria as well as ethical consideration.



CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the data obtained from the field. Through data analysis three main themes were generated in accordance with the study objectives which were: (knowledge on COVID-19 among taxi drivers, practices relating to COVID-19 among taxi drivers and sources of information with regards to the pandemic among taxi drivers). Some demographic characteristics of the respondents is also presented. The data is subsequently analyzed and interspersed with discussion in consonance with existing literature on the subject matter.

4.2 Demographic Distribution of the Respondents

All the respondents who participated in this study are Ghanaians and males.

The age bracket 36-45years formed the majority group while 25-35 years were the least group represented. Six of the respondents fell within the age range 46-60years. This bracket tells the story of quite a matured workforce.

Education-wise, ten (10) out of the fifteen (15) respondents have attained only JHS level of education, four (4) have not had any formal education with only one out of the fifteen respondents attaining an SHS/O/A-level educational status.

When it comes to religious affiliation, the study thirteen (13) of the respondents were Christians with two (2) being Atheists. On marital status, thirteen (13) of the respondents were married, one (1) of the respondents was single and one (1) was divorced.

4.3 Knowledge on COVID-19

In this section, the responses of the participants are reported in respect to the first study objective, namely, to find out the knowledge about to COVID-19 among taxi drivers. Some open-ended questions were posed to the respondents (taxi drivers) to help solicit the degree of knowledge they hold on the covid-19 disease. The queries relate to the nature, transmission, symptoms, prevention, and treatment of the disease. Some of the sub-themes that emerged from this theme are knowledge about symptoms, knowledge about transmission, knowledge about prevention and finally, knowledge about treatment. It is also important to note that a few of the participants had some misconceptions about the COVID-19 disease.

4.3.1 Knowledge about Symptoms

All the respondents who took part in this study had a fair idea about the signs and symptoms a person infected with the COVID-19 virus could exhibit. Most of them stated flu/cold and cough as the major symptom of the disease while other mentioned general weakness and tiredness as a sign/symptom. Some of the participants' responses are stated below:

The person becomes weak and unable to focus on work, so he needs to be examined to determine whether or not one is infected. So, after the test, we'll be able to determine whether or not one is infected (respondent aged 25-35).

A person infected with the COVID-19 virus may sneeze frequently and consistently...sometimes the person coughs

persistently, may have a runny nose and may even show signs of weakness (respondent aged 40 - 60).

4.3.2 Knowledge about transmission

The participants of this study have information about how COVID-19 is spread from one person to another. According to the participants, transmission becomes possible when an infected person emits droplets containing the virus into the air/atmosphere and other individuals breathe in the contaminated air. Some participants are also aware that transmission can occur when contaminated fluids comes into contact with the eyes.

What we heard was that the disease (COVID-19) is air-borne so the moment an infected person coughs into the air and you inhale, you will be infected (respondent aged 36-45)

What I know about the disease is that it is transmitted through a virus which we cannot see with our naked eyes. The virus can only be visible with the help of laboratory equipment/machines (respondent aged 36-25).

When it first started, I heard that staying in crowded areas can put you at risk of being infected with COVID...Also,

when you (referring to taxi drivers) pick an infected person and he/talks too much and his saliva droplets touches your eye, you can be at risk of the COVID-19 virus (respondent aged 46-60).

4.3.3 Knowledge about prevention

There is a high level of awareness about how transmission of COVID-19 can be prevented. A very large number of the respondents interviewed have an insight about the exact measures to take to protect themselves from the COVID-19 virus.

The vaccination...everyone should take the vaccine...that is what could protect us. I have taken the first injection; I am left with the second injection (respondent aged 25-35).

Stay away from persons who are showing signs of COVID...do not get too close to them when interacting with them (respondent aged 46-60).

You need to wear your mask and encourage your passengers to wear their mask too, especially if the passenger is showing visible signs of the COVID-19 disease (respondent aged 25-35).

Frequent use of sanitizer. Whenever I touch money, I apply some of the sanitizer on my hand. Also, when I pick passengers and they alight, I apply some of the sanitizer on the door handles (respondent aged 36-45).

The above narrations indicate that according to the knowledge of participants, the measures which are effective in preventing the spread of the virus are vaccination, social distancing, wearing of face mask and the use of alcohol-based hand sanitizers.

4.3.4 Knowledge about treatment

It is not surprising to note that most of the participants do not have much information about the clinical treatment of COVID-19. A few of the participants however pointed out that they are aware vitamin C is important for the treatment of the disease. Aside that a greater number of the participants stated that they had no idea.

As for that one (referring to treatment of COVID-19), I have no idea. We have left that to the professionals. When I feel unwell or have the slightest feeling that I have contracted the virus, I just visit the pharmacy (respondent aged 36-45)

I don't have much knowledge about that (respondent aged 46-60).

It is however worthy to note that majority of the participants have confidence in the local herbal medicines to treat their COVID-19 symptoms. Some of the participants also mentioned that adequate rest with good diet can help treat a patient with the COVID-19 disease.

We here our foods are very healthy and make us strong oo, so if you eat some proper homemade food, with our leaves and other things your body will be strong, and you will get well faster. The food, not the fried ones... those ones they are not very healthy (respondent aged 46-60).

I take a lot of water, soup and rest at home (respondent aged 25-35).

I take some rest and drink some local herbs (respondent aged 36-35).

Most of the respondents believe that herbal medicine is the best remedy, and that herbal medicine in addition to good nutrition is potent against most diseases including COVID-19.

4.4 Misconceptions about COVID-19

Although the study set out to find out the general knowledge of participants about the COVID-19 pandemic, data gathered on the misinformation/misconceptions about the disease in Ghana cannot be ignored. Data gathered on the field reveal that while a good number of the participants have a great insight of the what COVID-19 is, how it transmitted, prevented, and treated, a few of the participant also hold some mistaken beliefs about what the disease is and what it is not. In

fact, some of these participants even do believe that the COVID-19 pandemic is an illusion and not a reality:

Which disease? Forget it, there is no disease...Where is the disease? Tell me! If there is really a disease in the system, how come none of my family members has contracted it? Not a single person in my family! The government is just using COVID-19 as an excuse to squander our money (respondent aged 36-45).

Covid-19 is a scam for money. I believe that COVID-19 is a scam". "I don't think it is real, but I do what they say we should do because I don't want to run into trouble with authority (respondent aged 25-35).

I believe the sun helps to prevent the disease in Africa, especially...So I like staying out (respondent aged 46-60).

I do not believe in the vaccine. It is the mark of 666 (mark of the beast) and this is the end times. It is a scam. Malaria is common in Ghana not the COVID-19. The vaccine for covid-19 does not prevent the disease so I am not vaccinated (respondent aged 36-45).

I don't believe in the vaccine; I believe it is the mark of 666. I am a Christian and I know this is the end times (respondent aged 36-45).

Some participants were also of the view that they had full immunity against the COVID-19 virus.

One participant stated:

I can't get cold...I don't believe I can contract the virus (respondent aged 46-60).

I usually don't fall sick. Once I eat well and get some tots of, I am good to go. My system is strong – (respondent aged 36-45)

The above narrations clearly reveal that though a lot of resources have gone into educating people to get them to be fully aware of the COVID-19 pandemic and its associated dangers, some people still hold some beliefs that may put them at risk and even expose other persons who interact with them to the virus.

4.5 Practices relating to COVID-19

The second objective was to identify the practices relating to COVID-19 among taxi drivers. The questions posed to the participants sought to find out the level of adherence or compliance to the best practices in relation to covid-19 as stipulated by the WHO and Republic of Ghana Ministry of Health. Two sub-themes were obtained from the responses of the participants which are:

observation of the COVID-19 protocols and self-medication.

4.5.1 Observation of the COVID-19 Protocol

Respondents were asked to explain what they do with regards to the best practices in dealing with the COVID-19 menace. Most of the participants stated that they avoid crowded places, wear their face masks, and also clean their hands and disinfect surfaces frequently with alcohol-based sanitizers, especially those which are regularly touched, such as door handles. Below are some of the responses:

Frequent use of sanitizer. Whenever I touch money, I apply some of the sanitizer on my hand. Also, when I pick passengers and they alight, I apply some of the sanitizer on the door handles- (respondent aged 25-35).

I use sanitizer after handling customers' luggage...I use sanitizer. I also wear my mask when I am around people. Because of the "no mask, no entry" rule customers are also usually in mask (respondent aged 36-45).

I do all the things they say we should do; wear mask, wash hands, sanitize (respondent aged 46-60)

I stick to the protocol that are being spoken of. I have taken the vaccine too (respondent aged 25-35).

I wear mask and do other protocols because it is like a rule. I don't believe in COVID, but I do it because they say we should do it (respondent aged 25-35).

The mandatory protocols laid down to help curb COVID-19 is proving to be very useful because even individuals who do not believe in the existence of the disease are observing the protocol because they have no other options.

4.5.2 Self-Medication

It is sad to note that none of the participants interviewed seeks professional medical help when it comes to treatment of symptoms of the COVID-19 virus. Majority (9) of the participants stated they turn to herbal medicine when they begin to feel unwell or even suspect they might have contracted the virus.

I take local medicine [herbal]...I just boil herbs, drink some, bath some and inhale some (respondent aged 46-60).

I get local herbs and boil and take them (respondent aged 25-35).

I take some rest and drink some local herbs (respondent aged 36-45).



Other participants also stated that they take the local herbs as a preventive measure to COVID - 19.

I drink local herbs to build my immune system, eat well and keep to the protocol (respondent aged 46-60).

A few participants also mentioned that they visit the pharmacy to get some medications when they feel unwell or suspect they have been exposed to the COVID-19 virus:

I buy medicine from the pharmacy. I don't think COVID-19 is any different from the cold we used to have (respondent aged 25-35).

If I feel sick, I go to the pharmacy (respondent aged 36-45).

This practice is particularly dangerous because persons who engage in self-medication are likely to take the wrong medication for their illness as a result of misdiagnosis.

4.6 Sources of information on COVID-19

The last objective of the study was to ascertain the sources through which the taxi drivers get information relating to COVID-19. Majority of the respondents indicated that their main sources of information from television and radio. Others stated that they obtain their information about COVID-19 from health authorities such as the Ministry of Health. Others also stated that they get their information about COVID-19 from family and friends as well as from colleagues at the workplace.

The COVID now, whenever you turn on your radio or TV you will hear about it oo. It is even now that it has gone down, at first every time you put on the TV or radio, you will hear something about COVID (respondent aged 36-45).

As for this one, if you don't want to hear koraa you will hear oo. TV you will see and hear, radio too it is there (respondent aged 46-60).

When the disease started, some nurses and health workers visited us here to educate us about the disease (respondent aged 25-35).

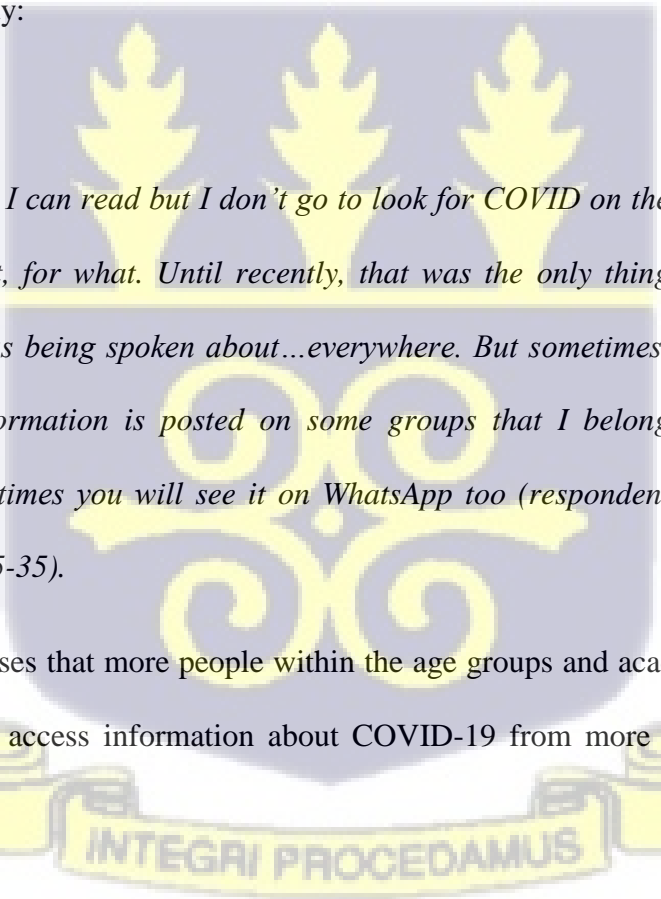
Sometimes, some of my colleagues here get into heated arguments about the disease...usually it is due to what the person has experienced or witnessed other people experience about the disease...From these arguments and discussions, I pick up what information I think/feel is right or wrong about the disease (respondent aged 46-60).



Another source of information mentioned by respondents was information vans and announcements at the airport:

As for here you will be there then you will hear announcement about COVID, sanitizer, handwashing, face masks. You can't run away from it. Some vans used to come around to talk about the disease when it first started (respondent aged 46-60).

When asked whether they access information on COVID from the internet, most of the respondents responded in the negative. There were however a few participants who admitted that though they do not go search for COVID-19 information on social media, they still chance upon the information anyway:



Oh, me I can read but I don't go to look for COVID on the internet, for what. Until recently, that was the only thing that was being spoken about...everywhere. But sometimes, the information is posted on some groups that I belong ...sometimes you will see it on WhatsApp too (respondent aged 25-35).

It is clear from responses that more people within the age groups and academic qualifications of the study participants access information about COVID-19 from more traditional means than from social media.

CHAPTER FIVE

DISCUSSION

5.0 Introduction

In this chapter, a detailed discussion of the of the study results is discussed. The discussion will put the study findings in context of existing literature.

The objectives of the study were to assess the knowledge and practices relating to COVID-19 among taxi drivers at the Kotoka International Airport in the La Dade-Kotopon District, and to identify the sources of COVID-19 information among the same target population.

5.1 Knowledge on COVID-19

Largely, participants in this study appear to have some general knowledge about the covid-19 disease. The knowledge/information is mainly about symptoms of COVID-19, mode of transmission, and prevention and treatment. This is particularly surprising considering the levels of education of the participants. This finding is relatively contrary to what Adesegun et al., (2020), Labban et al., (2020) and Sayedahmed et al., (2020) found about level of education and one's ability to correctly answer questions on COVID-19. Their separately conducted studies [Adesegun et al., (2020), Labban et al., (2020) and Sayedahmed et al., (2020)] found a direct correlation between participants' level of education and their ability to provide accurate/correct response to questions about COVID-19. This outcome may be due to the fact that, information/education about COVID-19 in Ghana did not only focus on print media but electronic media such as radio and TV, which reached majority of the country's population.

The findings of the study with respect to knowledge of COVID-19 seems to corroborate the findings of Ernest et al., (2016) in their study Ebola virus disease. According to their study, there was appreciable knowledge of Ebola disease among respondents, which they attributed to health

education and the prominence of Ebola virus disease issues on media. These findings thus suggest that health education when done properly, using various platforms and media actually gets people to acquire knowledge about issues. The knowledge gained from health education programs can be applied to improve health behavior outcomes.

5.2 Misconceptions

Although the current study's goal was to discover the levels of participants' knowledge on the COVID-19 pandemic, data gathered from the field also revealed that a few participants still have some misconceptions about the disease in Ghana. The findings of this current study reveal that some participants have this misconceived notion that they have full immunity against the COVID-19 virus. This finding is consistent with the findings of two separate studies reviewed earlier (Tabong & Segtub, (2021) and Adom, (2020)) which found that some individuals believe that the black race is immune from contracting the COVID-19 virus. Some participants also believe the presence of the sun (or the hot climate) in Ghana can help control/prevent the spread of the virus. This supports Tabong and Segtub (2021) finding which discovered some Ghanaians embrace the belief that the hot climate in Africa impedes the transmission of the virus. All these mistaken beliefs are inaccurate as they are not supported by scientific evidence.

Adongo et al., (2016) in a study to address misconceptions in Ghana's preparations towards Ebola virus disease outbreak identified misconceptions that the cause of the disease was spiritual. The presence of misconceptions among the respondents in this current study as well as in other studies cited, despite the health education and the knowledge respondents gain from health education activities indicate that it is important that measures be put in place to address such misconceptions. Health education should be done in a way that gives people a good understanding of the issues without leaving room for ambiguity.

5.3 Attitudes and Practices relating to COVID-19

Data gathered from the current study show that most of the participants adhere to the best practices in laid down by the WHO and Republic of Ghana Ministry of Health in the fight against COVID-19, namely, the use of alcohol-based hand sanitizer, wearing of the face mask, avoidance of crowded places. Majority of the participants interviewed revealed that they try as much as possible to observe the laid down 'dos and don'ts' as far as the fight of COVID-19 is concerned. This can be rated as positive attitude/practice which could help minimize the spread of the COVID-19 virus. Sayedahmed et al., (2020) indicated that good knowledge of COVID-19 is associated with positive attitudes and practices. As stated earlier, most of the participants interviewed have an insight of how the COVID-19 virus is transmitted as well as how the spread of the virus can be controlled. Thus, the findings of Sayedahmed et al., (2020) about the positive correlation between knowledge and positive attitudes/practices is supported. It is however important to note that knowledge about good deeds does not always translate into willingness to practice good deeds. This is particularly so, as some of the participants admitted that they only observe the protocol because they are mandated to do so. Thus, if they were given the liberty to choose, they would have chosen not to observe the protocol.

Another practice that was eminent in the findings of this study was the practice of self-medication. The use of herbal remedies stood-out as the main treatment participants use to fight/manage the symptoms of COVID-19. This finding supports Tabong and Segtub (2021) revelation that some individuals strongly believe that herbal remedies are effective in managing the disease. It is however important to note that Tabong and Segtub (2021) treated this notion of herbal remedies as a known treatment in the management of COVID-19 as a myth/misconception. Though not supported by scientific evidence, it is not certain whether this

practice is a myth/misconception or a reality as this practice yields results in most cases, thus individuals keep recommending it.

Still on self-medication, a few participants stated that they get some medications from the pharmacy when they feel unwell or suspect they have been exposed to the COVID-19 virus. This practice is not the best as it may lead to several complications which may prove to be detrimental to a person's health.

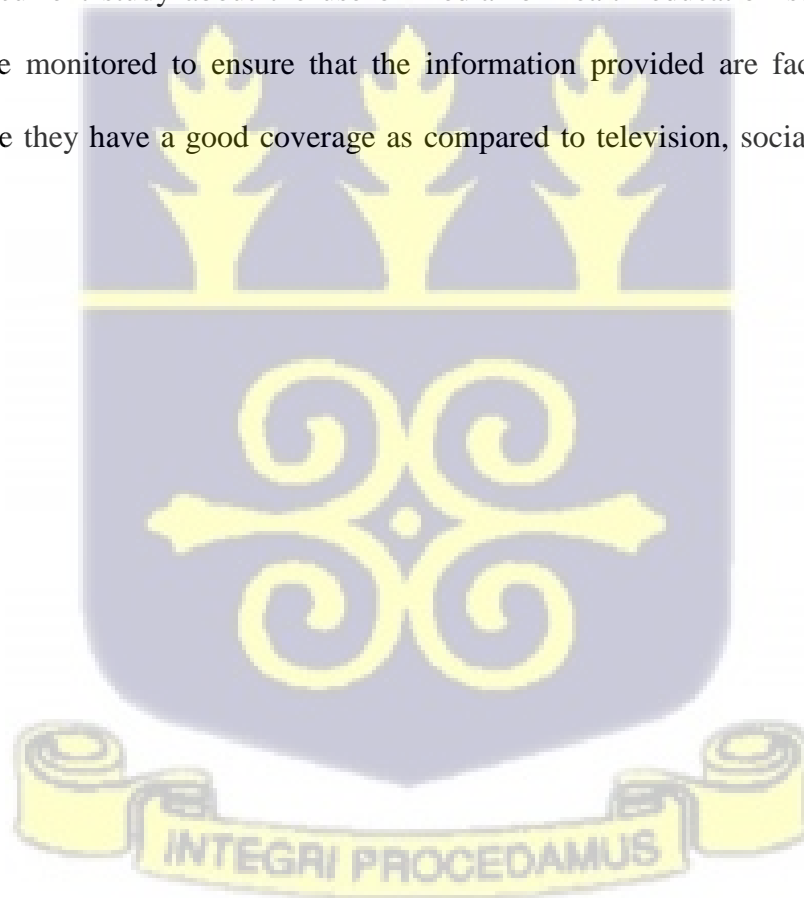
In a study by Adongo, Teg-Nefaah Tabong, et al., (2016) on preparing towards Ebola virus disease outbreak, it was observed that respondents resorted to herbal treatment or medications bought from pharmacies as their first line of response. Relating their study findings and those of earlier cited studies with this current study paints a picture of the health seeking behavior of some section of Ghanaians. Considering all the knowledge and information available about COVID-19, this approach to seeking healthcare is one that must be well considered in health education programs as this could mitigate against any progress made in containing the disease. If people continue to manage themselves at home with herbal preparations and over the counter medications, the disease may continue to spread and cause more havoc.

5.4 Sources of information on COVID-19

Data from this study reveal that participants' main sources of information are television, radio, community health workers, friends, and work colleagues. Zhou et al., (2020) found that persons who sought information through conventional sources like the television/radio and experts had adequate information on the disease while social media proved to be the most deceptive source to obtain information on COVID-19. Based on this finding, it is important to state that the participants in this study do not make use of information from social media and yet some of the source of information of participants is linked to whether they are misled or not. Those who

sought information through the mainstream media like the televisions and experts had adequate information on the disease. Zhou et al., (2020) in their study found that social media was the most deceptive source to obtain COVID-19 information.

In Ghana health education on some communicable diseases such as cholera and Ebola virus disease in the past, have has been done using various platforms such as radio, television and drama presentations. Ernest et al., (2016) indicate with respect to Ebola virus disease that the disease gained media prominence. That same study also indicated that radio was the commonest source of EVD information among their respondents. These findings from that study as well as findings of the current study about the use of media for health education suggests that those media should be monitored to ensure that the information provided are factual and not just sentimental since they have a good coverage as compared to television, social media and other forms of media.



CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This chapter presents the key findings made especially with regards to the objectives laid out in the study. Relevant conclusions are drawn based on the findings and recommendations made for future action.

6.2 Summary of Key Findings

1. Most of the respondents know the common symptoms of COVID-19 such as fever, cough, general weakness
2. Most of the respondents know about the mode of transmission of the disease such as inhalation of contaminated air, contact with an infected person or contact with infected surfaces.
3. Most respondents know ways to prevent COVID-19 infection such as wearing of facemasks, social distancing, handwashing/use of alcohol-based hand sanitizers.
5. Most respondents do not know about approved ways of treatment of COVID-19 and therefore resort to herbal treatment or over the counter medications
6. Most respondents adhere to stipulated protocols such as wearing of face masks and handwashing/ use of alcohol-based hand sanitizers.
7. Some respondents adhere to protocols in order to avoid the sanctions that are associated with non-adherence.
8. Most respondents get their information on COVID-19 from television and radio.

6.3 Recommendations

The study findings provide some insight into the knowledge, practices and information sources among taxi drivers in relation to COVID-19. These findings gave rise to the following recommendations.

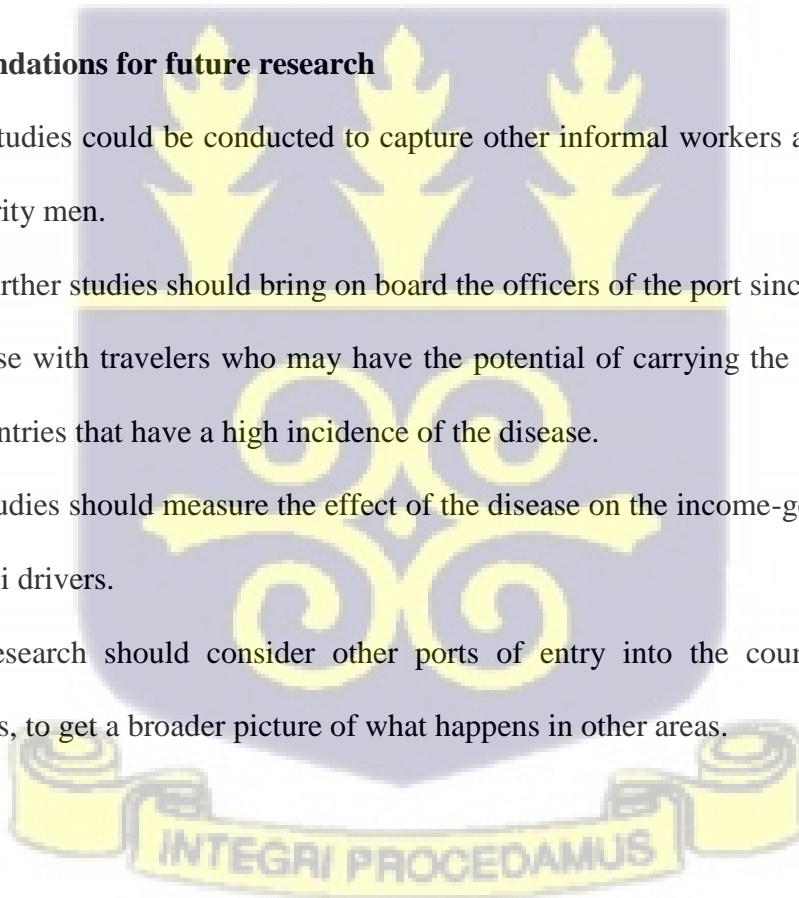
6.3.1 Recommendations for policymakers

1. Health promotion and education by the Health Promotion Division of the Ministry of Health should bring to light other signs of COVID-19 such as loss of sense of taste and loss of sense of smell.
2. Health promotion and education by the above Division should highlight protocols for the treatment and management of COVID-19, including self-isolation and when to report to hospital.
3. Again, education by the Health Promotion Division should be intensified to erase such negative practices such as drinking of alcohol and using herbal concoctions which are assumed to boost the system to help fight against the infection.
4. In addition to traditional media some community members (in this case taxi drivers) could be trained as advocacy agents by the Health Promotion Division in collaboration with the National Commission for Civic Education.
5. The Ghana Airport Company Limited should put in monitoring and evaluation measures to ensure that drivers follow stipulated protocols.
6. Port health authorities must ensure that taxi drivers undergo periodic screening for drivers who work at the airport.

7. The leaders of the Taxicab operators union must liaise with port health authorities and the Health Promotion Division to establish protocols for when members fall sick or contact the disease.
8. The Ghana Health Service and the Health Promotion Division must liaise with the Pharmacy council to provide training for pharmacists and licensed chemical sellers who will in turn educate and properly refer community members who present to them with signs of COVID-19 to the appropriate facilities for proper management.
9. Traditional healers must be engaged by the Ghana Health Service and given guidelines on how to identify, manage or refer suspected COVID-19 cases who report to them.

6.3.2 Recommendations for future research

1. Further studies could be conducted to capture other informal workers at the port janitors and security men.
2. Again, further studies should bring on board the officers of the port since they are directly inter-phase with travelers who may have the potential of carrying the disease especially from countries that have a high incidence of the disease.
3. Future studies should measure the effect of the disease on the income-generating capacity of the taxi drivers.
4. Future research should consider other ports of entry into the country, with similar objectives, to get a broader picture of what happens in other areas.



BIBLIOGRAPHY

- Adesegun, O. A., Binuyo, T., Adeyemi, O., Ehioghae, O., Rabor, D. F., Amusan, O., Akinboboye, O., Duke, O. F., Olafimihan, A. G., Ajose, O., Idowu, A. O., & Abiodun, O. (2020). The COVID-19 crisis in sub-saharan Africa: Knowledge, attitudes, and practices of the Nigerian public. *American Journal of Tropical Medicine and Hygiene*, 103(5), 1997–2004. <https://doi.org/10.4269/ajtmh.20-0461>
- Adom, D. (2020). Cultural and educational implications of the COVID-19 global pandemic in Ghana. *International and Multidisciplinary Journal of Social Sciences*, 9(3), 209–229. <https://doi.org/10.17583/rimcis.2020.5416>
- Adongo, P. B., Tabong, P. T. N., Asampong, E., Ansong, J., Robalo, M., & Adanu, R. M. (2016). Beyond knowledge and awareness: Addressing misconceptions in Ghana's preparation towards an outbreak of ebola virus disease. *PLoS ONE*, 11(2). <https://doi.org/10.1371/JOURNAL.PONE.0149627>
- Adongo, P. B., Teg-Nefaah Tabong, P., Asampong, E., Ansong, J., Robalo, M., & Adanu, R. M. (2016). *Preparing towards Preventing and Containing an Ebola Virus Disease Outbreak: What Socio-cultural Practices May Affect Containment Efforts in Ghana?* <https://doi.org/10.1371/journal.pntd.0004852>
- Afriyie, D. K., Asare, G. A., Amponsah, S. K., & Godman, B. (2020). COVID-19 pandemic in resource-poor countries: challenges, experiences and opportunities in Ghana. *Journal of Infection in Developing Countries*, 14(8), 838–843. <https://doi.org/10.3855/jidc.12909>
- Agarwal, V. (2014), "A/H1N1 vaccine intentions in college students: an application of the theory of planned behaviour", *Journal of American College Health*, Vol. 62 No. 6, pp.416-424.
- Ajzen, I. (1991), "The theory of planned behaviour", *Organizational Behaviour and Human Decision Processes*, Vol. 50 No 2, pp. 179–211.
- Ampofo, A. G., Adumatta, A. D., Owusu, E., and Awuviry-Newton, K. (2020), "A cross-sectional study of barriers to cervical cancer screening uptake in Ghana: an application of the health belief model" *PloS One*, Vol. 15 No. 4, pp. 1-16. doi.org/10.1371/journal.pone.0231459.
- Anamolga, P. R. (2015). *Knowledge, Attitudes and Perceptions of Community Members Toward the Ebola Virus Disease (Evd) in Paga, Kasena-Nankana West District*. 10506566, 1–100.
- Asante, L. A., & Mills, R. O. (2020), "Exploring the socio-economic impact of COVID-19 pandemic in marketplaces in urban Ghana", *Africa Spectrum*, Vol. 55 No 2, pp. 170-181.
- Baj, J., Karakuła-Juchnowicz, H., Teresiński, G., Buszewicz, G., Ciesielka, M., Sitarz, E., Forma, A., Karakuła, K., Flieger, W., Portincasa, P., & Maciejewski, R. (2020). COVID-19: Specific and Non-Specific Clinical Manifestations and Symptoms: The Current State of Knowledge. *Journal of Clinical Medicine*, 9(6), 1753. <https://doi.org/10.3390/jcm9061753>
- Bicalho, C., Platas, M. R., Rosenzweig, L. R., Sun, N., Wei, L., Shi, S., Jiao, D., Song, R., Ma, L., Wang, H. H., Wang, C., Wang, Z. Z., You, Y., Liu, S., Wang, H. H., Abboah-Offei, M., Salifu, Y., Adewale, B., Bayuo, J., ... Watkins, J. T. (2020). Do knowledge and attitudes matter for preventive behavioral practices toward the COVID-19? A cross-sectional online survey among the adult population in Bangladesh. *American Journal of Infection Control*,

- 6(1), 1–5. <https://doi.org/10.1016/j.heliyon.2020.e05799>
- Boldog, P., Tekeli, T., Vizi, Z., Dénes, A., Bartha, F. A., & Röst, G. (2020). Risk Assessment of Novel Coronavirus COVID-19 Outbreaks Outside China. *Journal of Clinical Medicine*, 9(2), 571. <https://doi.org/10.3390/jcm9020571>
- Bonful, H. A., Addo-Lartey, A., Aheto, J. M. K., Ganle, J. K., Sarfo, B., & Aryeetey, R. (2020). Limiting spread of COVID-19 in Ghana: Compliance audit of selected transportation stations in the Greater Accra region of Ghana. *PLoS ONE*, 15(9 September), 1–13. <https://doi.org/10.1371/journal.pone.0238971>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Carter, P., Anderson, M., Mossialos, E., & Abel-Smith, B. (2020). Health system, public health, and economic implications of managing COVID-19 from a cardiovascular perspective. *European Heart Journal*, 41(27), 2516–2518. <https://doi.org/10.1093/eurheartj/ehaa342>
- CDC. (2021, January 22). *Coronavirus Disease 2019 (COVID-19) – Symptoms*. Centers for Disease Control and Prevention; www.cdc.gov. <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>
- Center for Disease Control and Prevention. (2020). Strategies for Optimizing the Supply of Facemasks: COVID-19 | CDC. *Control Center of Disease, February*.
- Centers for Disease Control and Prevention. (2020). CDC COVID Data Tracker. In *Centers for Disease Control and Prevention*.
- Costa, V. de O., de Almeida, G. B. C., Nicolini, E. M., Rodrigues, G. de A., da Costa, B. M. A., Carvalho, G. H., dos Reis, Á. L. S., & Colen, D. P. (2020). Acute arterial occlusion of the lower limb as the main clinical manifestation in a patient with Covid-19 – Case Report. *International Journal of Surgery Case Reports*, 77, 454–458. <https://doi.org/10.1016/j.ijscr.2020.11.046>
- Covid-19 in Africa: Response areas | WHO | Regional Office for Africa. (2021, November 20). WHO | Regional Office for Africa; www.afro.who.int. <https://www.afro.who.int/covid-19-africa-response-areas>
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications, Incorporated
- Davidson, C. (2006). Transcription: Imperatives for qualitative research. *International Journal of Qualitative Methods*, 8(2), 36-52.
- Denzin, N., & Lincoln, Y. (2011). *The SAGE Handbook of Qualitative Research*. Thousand Oaks: CA: Sage.
- Dubey S, Biswas P, Ghosh R, Chatterjee R, Dubey M, & Chatterjee S. (2020). *Diabetes & Metabolic Syndrome: Clinical Research & Reviews Psychosocial impact of COVID-19. Diabetes & Metabolic Syndrome: Clinical Research & Reviews [revista en Internet] 2020 [acceso 26 de febrero de 2021]; 14(5): 779-788. January.* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7255207/#bib99>
- Durizzo, K., Asiedu, E., Van der Merwe, A., Van Niekerk, A., & Günther, I. (2021). Managing

- the COVID-19 pandemic in poor urban neighborhoods: The case of Accra and Johannesburg. *World Development*, 137, 105175. <https://doi.org/10.1016/j.worlddev.2020.105175>
- Ernest, O., Nettey, A., Ernest, O., & Enuameh, Y. A. (2016). *Knowledge , Attitudes and Preventive Practices on Ebola Virus Disease in the Kintampo Districts of Ghana*. 1–21. <https://doi.org/10.4236/health.2016.814146>
- French, J., Deshpande, S., Evans, W., & Obregon, R. (2020), “Key guidelines in developing a preemptive COVID-19 vaccination uptake promotion strategy”, *International Journal of Environmental Research and Public Health*, Vol. 17 No. 16, pp. 5893.
- Gao, Z., Xu, Y., Sun, C., Wang, X., Guo, Y., Qiu, S., & Ma, K. (2021). A systematic review of asymptomatic infections with COVID-19. *Journal of Microbiology, Immunology and Infection*, 54(1), 12–16. <https://doi.org/10.1016/j.jmii.2020.05.001>
- Ghana Health Services (2021). Retrieved from: <https://ghanahealthservice.org/covid19/dashboardm.php>. Assessed on 30th March 2021.
- Güner, R., Hasanoğlu, İ., & Aktaş, F. (2020). Covid-19: Prevention and control measures in community. *Turkish Journal of Medical Sciences*, 50(SI-1), 571–577. <https://doi.org/10.3906/sag-2004-146>
- Haider, N., Osman, A. Y., Gadzekpo, A., Akipede, G. O., Asogun, D., Ansumana, R., Lessells, R. J., Khan, P., Mahdi, M., Hamid, A., Yeboah-Manu, D., Mboera, L., Shayo, E. H., Zumla, A., Kock, R., & McCoy, D. (2020). 13 Mark Urassa, 14 David Musoke, 15 Nathan Kapata, 16 Rashida Abbas Ferrand. *BMJ Global Health*, 5, 21. <https://doi.org/10.1136/bmjgh-2020-003319>
- Head, K. J., Kasting, M. L., Sturm, L. A., Hartsock, J. A., and Zimet, G. D. (2020), “Covid19? A national survey assessing SARS-CoV-2 vaccination intentions: implications for future public health communication efforts”, *Science Communication*, Vol. 42 No. 5, pp. 698-723.
- Iqbal, M. A., & Younas, M. Z. (2021). Public knowledge, attitudes, and practices towards COVID-19 in Pakistan: A cross-sectional study. *Children and Youth Services Review*, 120(September 2020), 105784. <https://doi.org/10.1016/j.childyouth.2020.105784>
- Janz, K., & Becker, M. H. (1984). The Health Belief Model: A Decade Later, 1–47.
- Kamal Lettor, I. B., Apanga, P. A., Tii Kumbeni, M., Akunvane, R., & Akparibo, R. (2020). Knowledge and perceptions on COVID-19 among Senior High School students in Ghana: A cross-sectional study. *MedRxiv*. <https://doi.org/10.1101/2020.11.18.20234088>
- Labban, L., Thallaj, N., & Labban, A. (2020). Assessing the Level of Awareness and Knowledge of COVID 19 Pandemic among Syrians. *Archives of Medicine*, 12(3). <https://doi.org/10.36648/1989-5216.12.3.309>
- Lake, M. A. (2020). What we know so far: COVID-19 current clinical knowledge and research. *Clinical Medicine, Journal of the Royal College of Physicians of London*, 20(2), 124–127. <https://doi.org/10.7861/clinmed.2019-coron>
- Li, D. Q., Guan, X., Wu, P., Wang, X., Cowling, D. B., Yang, B., Leung, M., & Feng, Z. (2020). (No Title). *Public Health*, 13, 1199–1207. <https://doi.org/10.1056/NEJMoa2001316>

- Lukman, A. F., Rauf, R. I., Abiodun, O., Oludoun, O., Ayinde, K., & Ogundokun, R. O. (2020). COVID-19 prevalence estimation: Four most affected African countries. *Infectious Disease Modelling*, 5, 827–838. <https://doi.org/10.1016/j.idm.2020.10.002>
- Ministry of Health. (2020). Republic of Ghana Ministry of Health Provisional Standard Treatment Guidelines for Novel Coronavirus Infection COVID - 19 Guidelines for Ghana. In *Ghana, Ministry of Health*.
- Ministry of Health / Ghana Health Service Guidelines for International Flight Operations on COVID-19 Safety at the Kotoka International Airport. (2020). August.
- Nachega, J. B., Atteh, R., Ihekweazu, C., Sam-Agudu, N. A., Adejumo, P., Nsanzimana, S., Rwagasore, E., Condo, J., Paleker, M., Mahomed, H., Suleman, F., Ario, A. R., Kiguli-Malwadde, E., Omaswa, F. G., Sewankambo, N. K., Viboud, C., Reid, M. J. A., Zumla, A., & Kilmarx, P. H. (2021). Contact tracing and the COVID-19 response in Africa: Best practices, Key Challenges, and lessons learned from Nigeria, Rwanda, South Africa, and Uganda. *American Journal of Tropical Medicine and Hygiene*, 104(4), 1179–1187. <https://doi.org/10.4269/ajtmh.21-0033>
- Okunlola, M. A., Lamptey, E., Senkyire, E. K., Dorcas, S., & Dooshima, B. A. (2020). Perceived Myths and Misconceptions about the Novel COVID-19 Outbreak. *SciMedicine Journal*, 2(3), 108–117. <https://doi.org/10.28991/scimedj-2020-0203-1>
- Oleribe, O. O., Babatunde, A., Salako, L., Ka, M., Akpalu, A., Mcconnochie, M., Foster, M., & Taylor-Robinson, S. D. (2015). Ebola virus disease epidemic in West Africa: lessons learned and issues arising from West African countries. In *Clinical Medicine* (Vol. 15, Issue 1).
- Oude Groeniger, J., Noordzij, K., van der Waal, J., & de Koster, W. (2021). Dutch COVID-19 lockdown measures increased trust in government and trust in science: A difference-in-differences analysis. *Social Science and Medicine*, 275(March), 113819. <https://doi.org/10.1016/j.socscimed.2021.113819>
- Ozili, P. (2020). COVID-19 in Africa: socio-economic impact, policy response and opportunities. *International Journal of Sociology and Social Policy*. <https://doi.org/10.1108/IJSSP-05-2020-0171>
- Paital, B., Das, K., & Parida, S. K. (2020). Inter nation social lockdown versus medical care against COVID-19, a mild environmental insight with special reference to India. *Science of the Total Environment*, 728, 138914. <https://doi.org/10.1016/j.scitotenv.2020.138914>
- Polit, D., & Beck, C. (2010). *Essentials of Nursing Research: Appraising Evidence for Nursing Practice*. 7th Edition. Philadelphia: Lippincott William & Wilkins.
- Rodríguez-Rey, R., Garrido-Hernansaiz, H., and Collado, S. (2020), “Psychological impact and associated factors during the initial stage of the coronavirus (COVID-19) pandemic among the general population in Spain”, *Frontiers in Psychology*, Vol. 11, pp. 1540.

- Romer, D., and Jamieson, K. H. (2020), “Conspiracy theories as barriers to controlling the spread of COVID-19 in the US”, *Social Science and Medicine*, Vol. 263, pp. 113356. doi.org/10.1016/j.socscimed.2020.113356.
- Roy, S. (2020). Low-income countries are more immune to COVID-19: A misconception. *Indian Journal of Medical Sciences*, 72(1), 5–7. https://doi.org/10.25259/ijms_26_2020
- Sayedahmed, A. M. S., Abdalla, A. A. A., & Khalid, M. H. M. (2020). Knowledge, attitude and practice regarding COVID-19 among Sudanese population during the early days of the pandemic: Online cross-sectional survey. *Scientific African*, 10, e00652. <https://doi.org/10.1016/j.sciaf.2020.e00652>
- Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*, 24, 91–98. <https://doi.org/10.1016/j.jare.2020.03.005>
- Sutton, H. (2020). CDC issues COVID-19 guidelines for law enforcement personnel. *Campus Security Report*, 17(1), 9–9. <https://doi.org/10.1002/casr.30649>
- Tabong, P. T. N., & Segtub, M. (2021). Misconceptions, Misinformation and Politics of COVID-19 on Social Media: A Multi-Level Analysis in Ghana. *Frontiers in Communication*, 6(May), 1–13. <https://doi.org/10.3389/fcomm.2021.613794>
- Tenkorang, E. Y. (2018). Effect of knowledge and perceptions of risks on Ebola-preventive behaviours in Ghana. *Int Health*, 10, 202–210. <https://doi.org/10.1093/inthealth/ihy009>
- The WHO-China Joint Mission on Coronavirus Disease 2019, & World Health Organization (WHO). (2020). Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19). *The WHO-China Joint Mission on Coronavirus Disease 2019*, 1(16-24 February), 1–40. <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>
- Umakanthan, S., Sahu, P., Ranade, A. V., Bukelo, M. M., Rao, J. S., Abrahao-Machado, L. F., Dahal, S., Kumar, H., & Kv, D. (2020). Origin, transmission, diagnosis and management of coronavirus disease 2019 (COVID-19). *Postgraduate Medical Journal*, 96(1142), 753–758. <https://doi.org/10.1136/postgradmedj-2020-138234>
- Whitehead, D., & Lopez, V. (2016). Sampling data and data collection in qualitative research methods. *Nursing and Midwifery Research*, March 2019, 111–126. <https://www.researchgate.net/publication/255950308>
- WHO. (2020a). Emergency Use Listing Procedure. *World Health Organisation*, December, 1. <https://www.who.int/publications/m/item/emergency-use-listing-procedure>
- WHO. (2020b). Infection Prevention and Control guidance for Long-Term Care Facilities in the context of COVID-19. Retrieved March 29, 2020, From <https://www.who.int>. *Interim Guidance of World Health Organization*, March 1–5.
- WHO. (2020c). WHO Characterizes COVID-19 as A Pandemic. *World Health Organization*.
- WHO. (2020d). WHO Timeline - COVID-19. In *World Health Organization* (Issue April).
- World Health Organization. (2020a). *Archived: WHO Timeline - COVID-19*. World Health

Organization.

- World Health Organization (2021c), Retrieved from: <https://www.who.int/news/item/24-02-2021-covid-19-vaccine-doses-shipped-by-the-covax-facility-head-to-ghana-marking-beginning-of-global-rollout>. Accessed on 9th March 2021.
- World Health Organization. (2020). Guidance on developing a national deployment and vaccination plan for COVID-19 vaccines: interim guidance. *World Health Organization*, V, 89. https://www.who.int/publications/i/item/WHO-2019-nCoV-Vaccine_deployment-2020.1
- World Health Organization. (2021). Coronavirus disease (COVID- 19) technical guidance: Infection prevention and control. *Infection Prevention and Control*.
- Ye, T., Zhong, Z., García-Sastre, A., Schotsaert, M., & De Geest, B. G. (2020). Current Status of COVID-19 (Pre)Clinical Vaccine Development. *Angewandte Chemie - International Edition*, 59(43), 18885–18897. <https://doi.org/10.1002/anie.202008319>
- Zhou, J., Bishwajit Ghose, M.; Wang, R., Wu, R., Li,.; Zhifei, Huang,.; Rui, Feng, D., Feng, Z., & Tang, S. (n.d.). *Health Perceptions and Misconceptions Regarding COVID-19 in China: Online Survey Study*. <https://doi.org/10.2196/21099>



APPENDICES

Appendix A: Participant Information Sheet

Research Topic: COMMUNITY KNOWLEDGE, ATTITUDES AND PRACTICES RELATING TO COVID-19 AMONG TAXI DRIVERS IN LA DADE-KOTOPON DISTRICT: A CASE STUDY OF KOTOKA INTERNATIONAL AIRPORT

Introduction: My name is Princess Diana Tsadidey (Principal Investigator), a Master of Public Health student at the University of Ghana. I am undertaking this research in partial fulfillment for the award of a Master in Public Health Degree.

Background and purpose of research: COVID-19 is a disease caused by a newly identified virus. The disease is severe and can lead to death. It is transmitted from human to human through droplet inhalation as well as contact with contaminated articles or surfaces and touching of the eyes, mouth and nose after touching such surfaces without proper hand hygiene. Some typical signs and symptoms of COVID-19 include fever, headache, sneezing, loss of sense of taste and smell and difficulty in breathing. Some preventive measures include wearing of face masks, proper handwashing and social distancing.

Nature of research: This is a qualitative study and will be conducted at the Kotoka International Airport, and participants will be from the KIA taxicab operators union. This study is intended to identify the knowledge, attitudes and practices relating to COVID-19 in the community. The study findings will provide useful information to help plan interventions and policies for mitigating COVID-19 in the country.

Duration/ what is involved: Participants must be above 18 years old. Your participation in the study will require that you answer certain questions on socio-demography (age, sex, marital status, level of education, religion), COVID-19 knowledge (what COVID-19 is, the signs and

symptoms, prevention), practices (wearing of face masks, using hand sanitizers). This will take about 30-60 minutes. Either the Principal Investigator or Research Assistants will conduct the interviews.

Potential Risks: Minimal risk is anticipated since some questions maybe pose some discomfort. You may however choose not to answer questions that appear uncomfortable to you. Also, COVID-19 is a risk for everyone. You will therefore be provided with surgical face mask and given an alcohol-based hand sanitizer to disinfect your hands after touching any object.

Benefits: There is no direct benefit to for participating in this study. The findings from the study will however add to knowledge on COVID-19 and help to inform policies or programs to fight the disease.

Costs: There will be no cost for participating in the study.

Compensation: There is no compensation for participating in the study.

Confidentiality: All information about you will be protected to the best of our ability. The information shall be used for the purpose of this research work. Your name will not be captured on the consent form, and neither will your name be used in any of our reports.

Voluntary participation/withdrawal: Your participation in this research is voluntary and you are free to withdraw from the study at any point without it affecting you in any way. During the interview, you also have the right not to answer questions if you find them uncomfortable.

Outcome and Feedback: Data collected will only be used for this study. No feedback on the data will be given to participants.

Appropriate alternative Procedure and Treatment: You do not have to participate in the research to receive care or treatment. Opting out of the study has no consequences either.

Feedback: There will be no direct communication on feedback to participants. However, the findings of the study would be available to any policy makers in relation to the fight against COVID-19.

Funding information: This research is self-financed by the Principal Investigator.

Sharing of participants Information/Data: Data generated from the study will only be used for the purposes of this research. The Principal Investigator will own the data. Access to the data will only be granted to the research team. No unauthorized person will have access to the participants' information. The findings of this study may be published in a research journal for the purpose of sharing to a wider population. Such publications will not contain the name or any identifying information on any study participant.

Storage samples: No sample collection is required in this study.

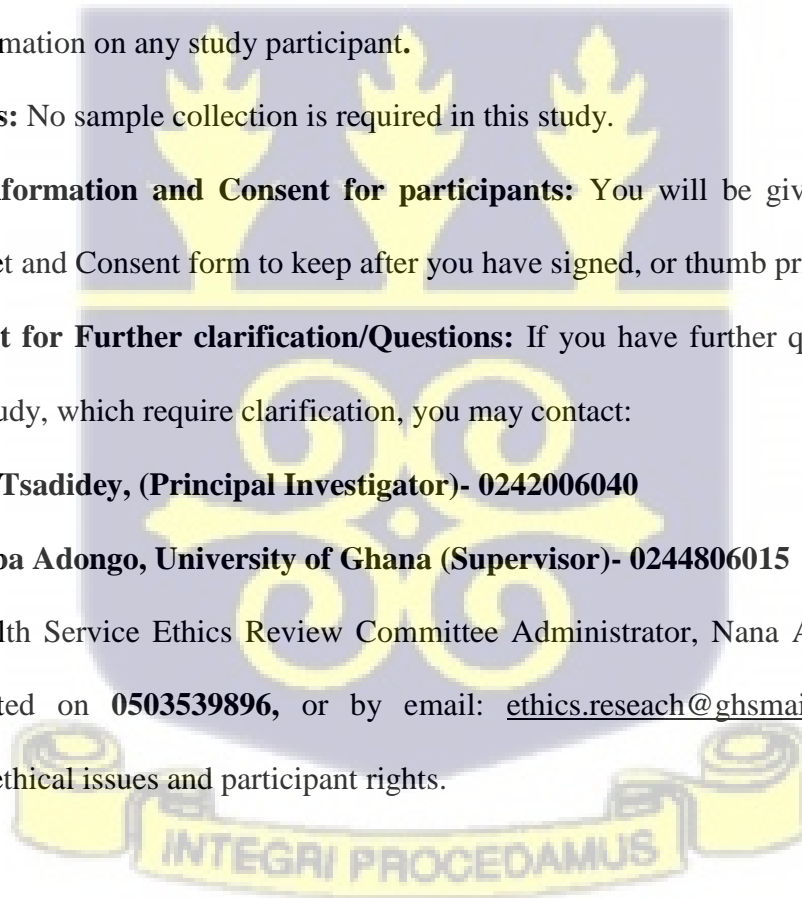
Provision of Information and Consent for participants: You will be given a copy of the Information sheet and Consent form to keep after you have signed, or thumb printed.

Who to Contact for Further clarification/Questions: If you have further questions or issues regarding this study, which require clarification, you may contact:

Princess Diana Tsadidey, (Principal Investigator)- 0242006040

Prof. Philip Baba Adongo, University of Ghana (Supervisor)- 0244806015

The Ghana Health Service Ethics Review Committee Administrator, Nana Abena Apatu may also be contacted on **0503539896**, or by email: ethics.reseach@ghsmail.org for further clarification on ethical issues and participant rights.



Appendix B: Consent Form

Participant Consent Form

Research Topic: COMMUNITY KNOWLEDGE, ATTITUDES AND PRACTICES
RELATING TO COVID-19 AMONG TAXI DRIVERS IN LA DADE-KOTOPON DISTRICT: A
CASE STUDY OF KOTOKA INTERNATIONAL AIRPORT

PARTICIPANTS' STATEMENT

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet read and satisfactorily explained to me in a language I understand (English/Twi/Ewe). I fully understand the contents and any potential implications as well as my right to change my mind (i.e., withdraw from the research) even after I have signed this form.

I voluntarily agree to be part of this research.

Name or Initials of Participant..... ID Code

Participants' SignatureOR Thumb Print..... OR Mark (Please specify).....

Date...

INTERPRETERS' STATEMENT

I interpreted the purpose and contents of the Participants' Information Sheet to the participant to the best of my ability in the Twi/Ewe language to his proper understanding.

All questions, appropriate clarifications sort by the participant, and answers were also duly interpreted to his/her satisfaction.

Name of Interpreter.....

Signature of Interpreter..... Date.....

Contact Details

STATEMENT OF WITNESS

I was present when the purpose and contents of the Participant Information Sheet were read and explained satisfactorily to the participant in the language he/she understood (English/Twi/Ewe).

I confirm that he/she was allowed to ask questions/seek clarifications and the same were duly answered to his/her satisfaction before voluntarily agreeing to be part of the research.

Name...

Signature..... OR Thumb Print OR Mark (please specify).....

Date...

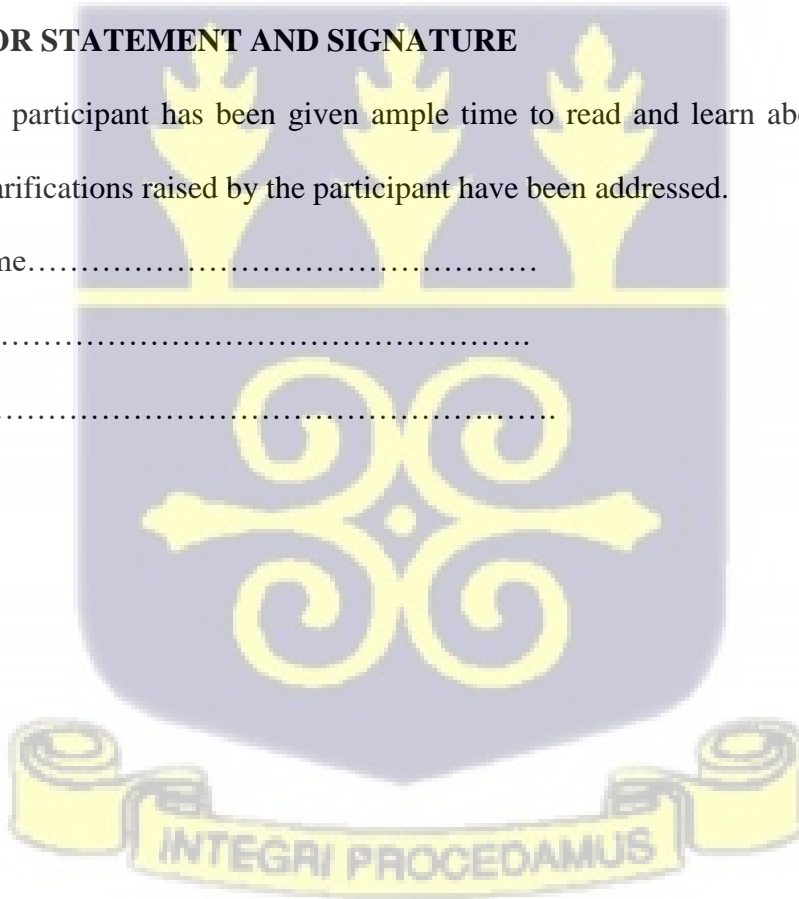
INVESTIGATOR STATEMENT AND SIGNATURE

I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant have been addressed.

Researcher's name.....

Signature

Date.....



Appendix C: Interview Guide

Research Topic: COMMUNITY KNOWLEDGE, ATTITUDES AND PRACTICES

RELATING TO COVID-19 AMONG TAXI DRIVERS IN LA DADE-KOTOPON DISTRICT: A
CASE STUDY OF KOTOKA INTERNATIONAL AIRPORT

TO DO

Greet participant

Make sure participant is comfortable

Introduce self and purpose of meeting

Ensure that participant has read formation sheet and understands it

Check that participant has signed consent form

Notify participant of start of interview and start recording

SECTION 1: KNOWLEDGE, ATTITUDES AND PERCEPTIONS ON COVID-19

1. Can you tell me what you know about COVID-19?

Ask about the causes, mode of transmission, prevention, and management/treatment.

2. How can you tell that a person has COVID-19?

Ask about signs and symptoms.

3. Can you tell how you and your colleagues are at risk of getting infected with COVID-19?

Ask about passenger COVID status.

5. What are some of the ways you can prevent yourself from getting infected.

Ask how to prevent transmission.

6. What are some of the things you are doing to protect yourself from getting the disease while working?

Ask about traditional medicine.

Ask about diet.

7. If you pick someone who shows signs of COVID what would you do?

SECTION B: PRACTICES

Can you tell me some of the practices you think may increase a person's risk of getting COVID?

Ask if there's any other information to be added.

SECTION C: SOURCES OF COVID INFORMATION

Ask about where they get information on COVID: radio, television, internet, social media, community vans, workplace facilities, religious platforms, family and friends, print media.



Appendix D: Ethical Clearance

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.



Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Digital Address: GA-050-3303
Mob: +233-50-3539896
Tel: +233-302-681109
Fax + 233-302-685424
Email: ethics.research@ghsmail.org
22nd November, 2021

My Ref. GHS/RDD/ERC/Admin/App | 21 | 538
Your Ref. No.

Princess Diana Tsadidey
C/O Mr. S.W.K Tsadidey,
P.O Box MA 134, Ho

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	GHS-ERC: 048/08/21
Study Title	Community Knowledge, Attitudes and Practices Relating to Covid 19 among Taxi Drivers in La Dade Kotopon District: A Case Study of Kotoka International Airport
Approval Date	22 nd November, 2021
Expiry Date	21 st November, 2022
GHS-ERC Decision	Approved

This approval requires the following from the Principal Investigator

- Submission of a yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID -19

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED... *James Akazili*

Dr. James Akazili
(Head, Ethics & Research Management Department)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra