NEAR EAST UNIVERSITY

INSTITUTE OF GRADUATE STUDIES

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THE IMPACT OF HEALTHY DIET ON COVID-19 PANDEMIC USING CONTINENTS, GROSS DOMESTIC PRODUCT AND POPULATION

M.Sc. THESIS

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Nicosia

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January, 2022

Approval

We certify that we have read the thesis submitted by Olanrewaju Owolabi Olukokun titled **"The impact of Healthy diet on COVID-19 Pandemic using Continents, Gross Domestic Product and Population**" and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Biostatistics.

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Declaration

I hereby declare that all information, documents, analysis and results in this thesis have been collected and presented according to the academic rules and ethical guidelines of Institute of Graduate Studies, Near East University. I also declare that as required by these rules and conduct, I have fully cited and referenced information and data that are not original to this study.

Olanrewaju Owolabi Olukokun

20/01/2022

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Olanrewaju Owolabi Olukokun

Abstract

The impact of Healthy Diet on COVID-19 Pandemic Using Continents, Gross Domestic Product and Population

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This study investigated the impact of Healthy Diet on COVID-19 Pandemic Using Continents, Gross Domestic Product and Population. COVID-19 Pandemic which is a worldwide pandemic which has brought about by Severe Acute Respiratory Syndrome Coronavirus2 (SARS-CoV-2). This disease has spread throughout all globes and it is one of the leading cause of death in countries.

The study adopted the descriptive survey research design. A Secondary data was used in the study. The study found out that that there is positive correlation between Confirmed cases of COVID-19 and GDP per capita with (r= 0.477, N= 170, p< 0.01), It also found out that Death cases of COVID-19 and GDP per capita has a significant positive correlation with (r= 0.363 , N= 170, p< 0.01) , there is significant positive correlation between Recovered cases of COVID-19 and GDP per capita with (r= 0.272, N= 170 P<0.01) and there is also a significant positive correlation between Active cases of COVID-19 and GDP per capita with (r= 0.416, N= 170, P< 0.05). The regression analysis performed reveals significant joint contribution of the independent variables (GDP Growth, Population, GDP per capita & Obesity **)** to the prediction of COVID 19 Death and the result yielded a coefficient of multiple regressions R = 0.514 and multiple R-square = 0.264, it shows that 26.4% variation in dependent variables (COVID Death**)** is explained by the independent variables (GDP growth, Population, GDP per capita & Obesity **)**. The table also suggests that the five factors combined accounted for 26.4% (Adj.R^2= .246) variance in the prediction of COVID 19 Death. The ANOVA result from the regression analysis shows that there was a significant effect of the independent variables on the COVID 19 Death, F

(4, 165) = 14.790, P<0.01, Also another regression analysis performed shows that in term of magnitude of contribution, Obesity made the most significant contribution (Beta= .415; t= 5.456; p<0.01) to the prediction followed by GDP per capital (Beta= .201; t= 2.751; p< 0.01) while GDP growth (Beta= .105; t= 1.524; p>0.01) and Population (Beta= .020; t= 0.288; p>0.01) are not significant predictors of Covid 19 Death.

Based on the above findings, there is need for government to provide more preventive measure to reduce the cases of COVID among continents, there is need for government to provide more health facilities for his citizen, there is also need for government to make vaccines are easily to all citizen so as to curb the spread of the deadly diseases, People should keep maintaining the COVID rules and protocol in order to reduce the case of the pandemic as this is the one of the leading cause of death and lastly, Government should try as much as possible to improve on the Gross Domestic Product of their countries in order to have positive effect on the citizen.

***Keywords*: COVID-19 pandemic, Continents,**

Gross domestic product and Population

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CHAPTER I

Introduction

The World Health Organization (WHO) is a specialized organization of the United Nations in charge of international public wellbeing and has its goal as "the fulfillment by all people groups of the greatest conceivable degree of wellbeing". He characterizes wellbeing as "a condition of complete bodily, psychological along with social development and not just these nonappearances along with disease as well as infirmity. Wellbeing can be advanced by empowering refreshing exercises, for example, regular physical exercise, satisfactory sleep or staying away from unhealthful exercises or circumstances, such as smoking or excessive stress.

Coronavirus is an illness and infection is any destructive deviation from the typical underlying or useful condition of an organic entity, by and large connected with specific signs and side effects and varying in nature from actual injury. An infection seems to be a unique syndrome which antagonistically alter design or the capability of a whole or a portion associated with human, because this is not as a result of whatever immediate external harm. Illnesses are commonly recognized as conditions associated with detailed manifestations as well as symtoms. The sickness could well be driven about by external factors like microorganisms or through means of internal issues and problems. The insusceptible framework's dysregulation could create a diverse variety of illnesses, involving various kinds of immunosuppression, severe obsessiveness, allergy symptoms, and immune disorders

In humans, sickness is generally used more broadly to refer to any ailment that brings agony, breakage, problem, societal concerns, or death to the person afflicted, or similar concerns for others in contact with the individual. Inside a general context, it occasionally integrates injuries, incapacities, mess, illnesses, sicknesses, disconnected adverse reactions, freakish practices, and atypical variants of design and ability, which may be considered as discernible categories in various situations and for various objectives. Illnesses may have an affect on people not just physically, but also intellectually, since contacting and surviving with a disease could change a person's outlook on existence.

Their are four main segments of sickness: uncrollable infections, insufficiency illnesses, innate illnesses (counting both hereditary sicknesses and non-hereditary inherited infections),

and physiological infections. Infections can likewise be grouped in alternate ways, for example, transmittable versus non-transferable illnesses.

An irresistible or a contagious infection or transferable sickness, is an ailment coming about because of a disease. A plague might be confined to one area; in any case, in the event that it spreads to different nations or landmasses and influences a considerable number of individuals, it could be named a pandemic. An endemic is a circumstance wherein an illness is dependably present. Pandemic is a plague of a powerful ailment that has spread across a gigantic area like various landmasses or countries around the world, affecting a lots of individuals. Pandemic is similarly scourge occurring on a scale that crosses worldwide cutoff points, regularly impacting people on a general scale. An ailment or condition isn't just a pandemic since it is endless or kills numerous people; it ought to moreover be compelling. For instance, COVID-19 is responsible for some passing across various countries of the world since it is an irresistible infection (for instance effectively communicable)

The contamination is for the most part spread between people in closeness, oftentimes through little beads delivered by hacking, sniffling, and talking. The drops for the most part going through air over critical distance additionally communicated through more modest beads that can stay suspended perceptible all around for longer time spans in encased spaces, as generally ordinary for airborne disorders. Less normally, human could be spoiled through reaching the soiled surfaces as well thereafter reaching there faces. It is for the most part irresistible during the underlying three days later the start of signs, though spread is possible before aftereffects appear, and from people who don't show indications.

Typical incidental effects consolidate fever, hack, weariness, windedness, and loss of sensation of smell. Entrapments might incorporate pneumonia and intense respiratory agony condition. The clinical outcomes say the agonizing season of the pandemic might go from two to fourteen (2-14) days later contamination and hatching time period commonly wraps up around four to five (4-5) days and starting there appears to be a clinical indications and the world wellbeing association said the recuperation cycle for gentle cases is around fourteen (14) days and extreme cases to be three to six (3-6 weeks) a month and a half.

Effect of COVID-19 on the global economy

The World Health Organization (WHO) pronounced COVID19 a worldwide wellbeing crisis around January,2020; around March11, it reported the growing episode occurred formally as a pandemic, a most critical stage of health crisis. At that point, as a result of these crises, the $90 trillion global economy was affected in a way that hasn't been seen in over a century. Every part of the globe has been affected by the spread of the viral sickness, which has been identified in every country. This shows the interrelated existence of the worldwide economy, because the disease was already found throughout each part of the world.

By early March 2020, the central focus of contaminations had started to shift from China to Europe, specifically Italy; however, by April, the convergence point had shifted to the United States, where the number of illnesses was increasing at an alarming rate. Per the World Health Organization, by April2021, India, Brazil, parts of Africa, and parts of Asia had surfaced as viral issue regions, with the multitude of infectious diseases and deaths attempting to reach record levels.

These COVID viral pandemic is a remarkable worldwide peculiarity that is additionally a profoundly private involvement in wide-running impacts. The pandemic has upset lives across all nations, domains and networks and adversely impacted worldwide financial development in 2020 past anything encountered in almost a century. According to indicators, the illness slowed worldwide economical growths in 2020 at an annual regression of roughly -3.2percent, with a recovery of 5.9 percent expected in2021. This is predicted that worldwide commerce has decreased by 5.3 percent in2020, although are expected to increase to 8.0 percent in2021. As per an agreement of gauges, the financial slump in 2020 was not quite as negative as at first assessed, due to some degree to the monetary and money related approaches states embraced in 2020.

As Per the World Health Organization, these COVID19 outbreak would have affected over 246.6millionpeople worldwide by Nov 1,2021, including over 5.0million deaths: Well over 80 nations once blocked their crossings to visitors to polluted nations, urged organizations to close, educated their people to self-quarantine, and shuttered institutions toward an approximated 1.5billionchildren.

As compelling cases started to increase dramatically in february,2020, state-run administrations undertook extraordinary efforts in March,2020 to safeguard socializing to limit the pandemic spread, accidentally producing a worldwide monetary crisis. Around Mar,2020, government reactions were exceptional in terms of the speed with which it occurred, its scope of the financial or macroeconomic strategies used, and the number of nations that participated, again lacking a formalized, written agreement. Traditionally, state-run administrations used monetary ways to settle monetary business sectors and ensure credit improvement. Following that, state-run administrations concentrated their strategy operations on financial measures intended to stimulate monetary expansion, as well as strategic isolations and social removal acts. Legislators created plans for making, procuring, and shipping antibodies in the third phase. Like the healthcare & financial repercussions have developed and endured, the periods of state engagement have become less specific: for example, attempts to immunize people have combined with further financial initiatives to sustain family pay.

Furthermore, a resurgence in viral instances, as well as the unfolding of newer with highly lethal variants of the COVID, forced a few companies in 2021 to reduce their monetary growths estimates. Regardless alongside this reality that vaccination rates grew in several developed economies as they attempted to collect antibodies and immunize their citizens in order to restore their economies to before the pandemic rates or higher. Financial market indexes had recovered a significant portion of their losses from March and April 2020, energy costs had surpassed pre-pandemic levels, forces such as the USD had often enabled, and job markets appeared to be leveling off. Customers in affected nations seemed to have adapted in response to pandemic limits, depending on unemployment insurance, personal reserve funds, and borrowing to fund their consumption activities. In reaction to the virus's spread and mid-business dismissals, individual user consumptions often grew and reduced enhanced family's business expenditure, in any case, increased interest in a wide range of items, such as room and board, nourishment, power, and innovative and then used automobiles and trucks, which were prompted by supply problems and raised client and maker costs in September, would increases at monthly rates of 0.4 percent and 0.5percent, respectively, or at rate of more than 4.8 percent and 6.0 percent.

After a period of time has passed, the influence on job market may become hazardous, with a large proportion of the workers refusing to resume to pre-pandemic positions. Laborers who have been laid off during the emergency apparently reconsidered returning to their prior jobs and looked into other options that may affect the pace of monetary recovery. Similarly, economies may incur long-term costs as a consequence of children who have been kept out of face-to-face education for an extended period of time, since this may result in inferior academic performance or education quality, as well as delaying entry into the labor market.

As a result, the emphasis of government policy changed from the health problem to macroeconomic or monetary market concerns, which were debated via a jumble of monetary, fiscal, and others procedures, such as connection dismissals, measured isolations, and friendly connection limits.

Due to waves of immigration of COVID-19 a cases, the ILO issued a revised estimate in June 2021, stating that business levels internationally stayed below pre-pandemic levels throughout the first half of 2021. Following that, the ILO predicted a 4.8 percent reduction in working hours in the first half of fy20 and a 4.4 percent reduction in the 2nd period of 2021, equal to 140 million and 127 million daily employments, correspondingly. The ILO also predicted that in the first half of 2021, the decline in total hours worked was comparable to a 5.3 percent drop in worldwide specialist pay, including government relocation payments and benefits, or $1.3 trillion. Regardless of a lengthy recovery in job creation in 2021 and 2022, the ILO estimates that businesses will be 75 million jobs short in 2021 and 25 million jobs short in 2022 when compared to the number that professions predicted to be generated in the absence of the pandemic.

The possibility of a sustained money - related rebound in fall2021 and early 2022, including thereby a rebound in the wider global economy, has improved as countries have made headway in immunizing emerging sectors of their populations. In any case, new COVID-19 infection variations and a surge in investigated cases in big developing nations, as well as vaccination immunity among some groups in industrialized economies, raise worries regarding the speed and strength of an economic security in the near future. A slew of dramatic incidents throughout Europe, Latin America, Russia, the United States, Japan, Brazil, India, and most of Africa refueled calls for lockdowns and curfews, and acted to stymie or delay an expected

monetary recovery until late 2021. The epidemic's financial consequences affect a variety of sectors of the economy, notably the humanitarian sector, as well as certain population groups, and may lead in employment losses. Workers are sometimes rethinking their career decisions and job design, which might imply post-pandemic economies marked by more changed working practices and changing metropolitan surroundings. Regardless of the cost of greater degrees of deprivation, lives lost, professions decimated, or increased social misery, human toll in terms of loss of life will always have an influence on global economic advancement. According to some projections, 65 million to 75 million people would be in need by 2020, with 80 million more individuals undernourished than before the outbreak. Furthermore, according to some research, the drop in global exchange in 2020 resulted in a disproportionately heavy fine for exchange-subordinate developing and rising countries. This document gives an outline of worldwide financial expenses to date, as well as legislation and international organization actions.

As the Coronavirus plague started, the worldwide economy was looking to restore an expansive based recuperation. The holding up impact of creating trade protectionism, trade banters among significant exchanging accomplices, falling item and energy costs, and monetary weaknesses in Europe over the effect of the Assembled Realm's exit from the European Association were all placing tension on worldwide money related turn of events. Every one of these worries, all alone, introduced a reasonable test for the worldwide economy. In any case, the worries debilitated the worldwide economy and decreased the accessible plan adaptability of different public pioneers, eminently in the most evolved countries. While the monetary effect has developed less certain, the blend of methodology approaches might keep on affecting how firms sort out their work powers, on worldwide stock chains, and on government reactions to a worldwide prosperity emergency.

Assessing the effect of the sickness has been particularly difficult because of its quick spread and developing impacts for worldwide and public paces of money related turn of events. In the beginning phases of the worldwide monetary droop, money related numbers were exacerbated by a critical decrease in the expense of crude oil. From that point on, oil costs recuperated from a low of nearly $20 per barrel in April 2020 to a scope of $40 to $45 per barrel before the finish of 2020, to some extent mirroring the decrease in worldwide money related

movement. By early June 2021, the worldwide cost of Brent crude petrol had above $70 per barrel, a level it kept up with until early October, when it outperformed $80 per barrel.

Through the primary portion of 2021, monetary information turned out to be more sure because of a typical re-appearance of pre-pandemic paces of improvement. All things considered, the monetary circumstance has remained uncommonly fluid all around the globe and for most of nations and areas. Weakness concerning the expansiveness and profundity of the medical care related financial results keeps on affecting the impression of hazard and unconventionality in money related organization areas and corporate route. Moreover, weaknesses connected with the worldwide pandemic and the viability of public drives intended to limit its spread and a resulting wave of diseases have added to the vulnerability. Organizations have delayed venture choices, laid off specialists who had recently been furloughed, and surprisingly announced monetary insolvency on many occurrences.

COVID-19 Pandemic and Obesity

COVID-19 Coronavirus is a worldwide peculiarity which is putting a strain on the shortcoming of medical services frameworks. The absence of a set up treatment against Pandemic contamination and the apportioning of care brought about an emotional situation. Patients with COVID-19 with heterogeneous manifestations from asymptomatic structures to extreme intense respiratory pain and the greater part of the contaminated patients are bound to have raised degrees of provocative markers. The most noticeably awful hit populace includes more established individuals particularly heftiness (generally estimated with weight record, BMI) is over and over announced as a significant danger factor for extreme complexities of COVID-19.

Obesity is perceived as both an illness and a condition that improves the probability of fostering a wide scope of non-transmittable sicknesses and furthermore improves the probability that irresistible infections will prompt genuine outcomes and most obviously evident in the worldwide spread of the SARS-CoV-2 infection and the subsequent pandemic of COVID-19, overweight prompts heftiness and is profoundly critical indicator and related with seriousness of COVID-19 which remember need for clinical benefits for the emergency clinics for individuals

living with overweight who foster intricacies from COVID-19 is additionally an indicator of death from COVID-19.

The nations where not exactly a large portion of the grown-up populace is named overweight has the probability of death from COVID-19, out of the 2.5 million COVID-19 passings detailed before the finish of February 2021, 2.2 million were in nations where the greater part the populace is named overweight.

The COVID-19 pandemic has shown that a cultural, overall reaction to an infection is conceivable and furthermore presented the basic to address other worldwide wellbeing difficulties like corpulence. Advancing proof on the nearby relationship between COVID-19 and hidden heftiness gives another earnestness - and motivation - for political and aggregate activity.

Obesity is an infection that doesn't get prioritization equivalent with its pervasiveness and effect, which is rising quickest in arising economies. It is a door to numerous other non-transferable sicknesses and emotional well-being disease. Obesity prevention techniques should be created, tried and carried out across the nations and life course from pre-origination, through adolescence, and into more seasoned age. So there is need for us all to invest all endeavors to forestall both at essential and optional corpulence. Avoidance endeavors to be proceeded as a basic means to expand populace, execution of approaches by government parastatals to decrease youth corpulence and furthermore for government to sharpen individuals that there are different ways of treating stoutness which incorporate conduct, pharmacological, advanced, healthful, active work based and careful mediations and furthermore to make treatment of weight effectively available to all individuals, the executives of hefty patients with

The commitment of Obesity to the seriousness of COVID-19 can be clarified in numerous ways. Corpulence is a very much perceived danger factor for diabetes, hypertension, and cardiovascular sickness, which are all indicators of helpless results in COVID-19. Heftiness may likewise weaken invulnerable reaction to viral contaminations. Then again, it ought not be disregarded that corpulent people might experience the ill effects of disgrace and burdensome manifestations currently in typical occasions. This might deliver them bound to limit their social contacts with unfavorable outcomes to their physical and mental spaces in the time of COVID-19.

Statement of the Problem

Since the inceptıon of the COVID-19 Pandemic the entire world is sufferıng from the pandemic and it has caused more hurtful consequences for the citizens of varıous countries than the other infection that has at any point came to being. The Coronavirus pandemic, is a reliable worldwide pandemic which is brought about by extreme intense respiratory condition Coronavirus2 (SARSCoV2). In December 2019, the flare-up was first found in Wuhan, Hubei, China. additionally, on Thursday, 30th January, 2020 the World Wellbeing Association affirmed the episode a General Wellbeing Crisis of Worldwide Concern and on Wednesday, 11th March, 2020 a Pandemic and is portrayed as a disease or any issue from common down to earth state in a human, animal or a plant and this is credited to a specific aftereffects.

According to worldometer Coronavirus Cases, As at Tuesday 18 January, 2022, more than 332,106,144 absolute instances of pandemic have been accounted for in various countries, and nations, more than 5,566,116 passings and in excess of 269,362,801 people have recuperated all over the planet. SARS-CoV-2 is basically spread through respiratory drops including sprayers from a contaminated person who wheezes, hacks, talks or talks, in closeness to other people. Beads including sprayers can be breathed in or saved in the nose and mouth or on the eyes.

COVID pandemic has moreover caused financial interference worldwide and socially and including the greatest overall slump inside ongoing memory as it impacts around 332 million people amounting to around 4.2 % of the whole absolute people of 7.9 billion people which is current complete people as evaluated as at January 2022 by Joined together Countries. It has furthermore provoked the deferral or withdrawal of worldwide endeavors, social affairs, displaying, severe, political, and far reaching improvements, endless stock and insufficiencies and reduced releases of toxins and ozone hurting substances. Schools, schools, and colleges have as of late proceeded back for face-face guidance and strategy for review as various countries of the world hug a web based technique for pack to have a ceaseless insightful gathering. Misinformed judgment about the contamination has similarly spread through friendly and wide correspondences. There have been episodes of xenophobia and exploitation Chinese people and against those clear as being Chinese or as being from locales with high illness rates.

Purpose of the Study

1) To investigate effect of COVID-19 based on Continents across countries.
2) To examine the effect of COVID-19 based on gross domestic product across countries.

Research Questions and Hypothesis

1) Is there a significant distinction between occasions affirmed by Coronavirus and those affirmed by Landmasses?

H_O: There is no genuinely huge distinction in affirmed Coronavirus examples across landmasses.

H_1: A genuinely huge distinction exists among Landmasses and affirmed Coronavirus cases.

2) Is there any genuinely huge distinction among Landmasses and Coronavirus Passings?

H_O: There is no measurably huge distinction in Coronavirus Demise occurrences across mainlands.

H_1: There is a measurably huge distinction in Coronavirus Demise occurrences across Mainlands.

3) Is there a genuinely huge distinction between examples recuperated from Landmasses and those recuperated from Coronavirus?

H_O: There is no genuinely huge variety in Coronavirus recuperated cases by landmass.

H_1: There is a genuinely huge variety in the quantity of Coronavirus recuperated cases by landmass.

4) Is there a genuinely huge distinction between Coronavirus Dynamic and Landmasses cases?

H_O: There is no genuinely huge variety in Coronavirus Dynamic cases across Landmasses.

H_1: There is a genuinely huge distinction between examples of Coronavirus Dynamic and those of Landmasses.

5) Is there a genuinely huge distinction between Gross domestic product per capita and affirmed examples of Coronavirus?

H_O: No genuinely huge distinction exists between Gross domestic product per capita and affirmed examples of Coronavirus.

H_1: A genuinely huge distinction exists between Gross domestic product per capita and affirmed examples of Coronavirus.

6) Is there any relationship between Gross domestic product per capita and Coronavirus Passings?

H_O: There is no genuinely huge distinction between Coronavirus Passing cases and Gross domestic product per capita.

H_1: A genuinely huge distinction exists between Gross domestic product per capita and Coronavirus Passings.

7) Is there a genuinely huge distinction between Gross domestic product per capita and Coronavirus cases recuperated?

H_O: There is no genuinely huge connection between Gross domestic product per capita and Coronavirus cases recuperated.

H_1: A genuinely huge distinction exists between Gross domestic product per capita and Coronavirus cases recuperated.

8) Is there a genuinely huge distinction in Gross domestic product per capita between the Coronavirus Dynamic and latent cases?

H_O: No genuinely huge distinction exists between Gross domestic product per capita and Coronavirus Dynamic examples.

H_1: The distinction between Gross domestic product per capita and Coronavirus Dynamic occasions is genuinely critical.

Significance of the study

The findings of this study may be useful for future research aimed at expanding the information available about the Coronavirus pandemic's evolution and may be used by non-governmental organizations, population strategy developers, clinical professionals, government organizations, and private and public health professionals to develop new approaches and assessments of recent developments in the pandemic's critical determinants.

Limitation of the Study

Numerous researchers and analysts have composed and led research on what is liable for various number of COVD-19 Confirmed, Death, Recovered and Actıve cases.

In this research there is by all accounts a gap in this dataset on the grounds that the information we utilized was gathered in 2017 from170 nations across the globe while COVID-19 healthy-diet dataset was a current phenomenon as it was gathered in 2020 that the Coronavirus pandemic appeared.

Definition of Terms

COVID-19 PANDEMIC

Coronavırus dısease 2019 (COVID-19) is characterized as disease brought about by a novel Coronavırus currently called Severe Acute Respiratory Syndrome Coronavırus 2 (SARS-CoV-2)

which was first distinguished in the midst of anepisode of respiratory ailment cases in Wuhan City, Hubei Territory, China

CONTINENTS

This is described as a tremendous piece and plots of land mass secluded from other land masses via oceans. It is moreover described by how the stone is made up and how it came to be by his space, size, etc.

GROSS DOMESTIC PRODUCT

This is described as outright and all monetary related worth of each completed labor and products that a country's limits made in a given time span. In like manner, it can likewise go about as a score card of monetary data of a country.

POPULATION

This is described as absolute number of people in a geological district be it city, region or the world overall. Total number of people ın the world is around 7.9 billion as of January 2022 as per the latest Unıted Natıons estımates expounded by Worldometer.

CHAPTER II

Literature Review

The year 2020 has been set apart by the flare-up of the Coronavirus pandemic (Covid). This disease has spread to different nations, dulling the existences of innumerable individuals who have been compelled to remain at home under containment. Various examinations have endeavored to survey the impact of this pandemic from an assortment of points of view; regardless, this study will focus on the infection's effect on landmasses and GDP in 170 nations.

At the point when new data of a plague started spreading in a Chinese city in mid-2020, no one expected the disease's worldwide reach in such a brief time frame. From Wuhan (China) to New York (USA), the new Coronavirus, Coronavirus disorder 2019 (Covid), or serious intense respiratory condition Coronavirus 2 (SARS-CoV-2), has crippled, to a more prominent or lesser degree, life in various countries, bringing about an enormous number of passings and around 6 million defilements. In this manner, experienced scholastics are practicing judiciousness by coordinating assessments into the infection, the sickness it causes, the circumstance it makes, and the populace it assaults, from an assortment of points of view, including careful overviews of the composition.

Regardless, investigators of this subject are not restricted to researchers, health specialists, or doctors. It is basic to take note of Maestre's (2020) responsibility in an article on the contamination that caused the pandemic, where he explains using different related terms that the fair term "disease" in Latin signifies "toxin," and along these lines most of force research is endeavoring to notice a medicine that will kill the disease. Moreover, the Greek expression ov (in Latin, pharmacum) means poison. The connection between the two ideas is that drug store shops are keeping watch for "hurts" that will dispose of the "hurts" that risk people's wellbeing or need to be secured. Review the image of pharmacies, the "Bowl of Hygieia" with the snake that pours a "poison" into it that changes into an antidote. The expression "Coronavirus" is given to this since, when amplified, the "disease poison" takes after a "crown," setting up it as the ruler of toxins.

As a beginning stage for this review, the World Wellbeing Association (WHO, 2020a) announced this infection brought about by the Coronavirus (Covid) to be a pandemic. It was at

first reported on December 31, 2019 in Wuhan (China). As indicated by the World Wellbeing Association (2009), the worldwide general wellbeing local area perceived the prerequisite for normalized investigation and information assortment following the 2009 flu diseases, and subsequently the WHO Expert Working Social event on Phenomenal Investigation and Studies advanced a couple of standard shows for pandemic flu. This has incited the World Wellbeing Association (2019a, 2020b) to foster practically identical shows for the Center East respiratory infection Coronavirus (MERS-CoV) and, with the help of expert advice, to change influenza and MERS-CoV shows to support better appreciation of Covid's clinical, epidemiological, and virological attributes.

Moynihan Abdominal muscle et al. (2020) expressed that remaining at home (which incorporates computerized training, brilliant working, and a limitation on open air and in-exercise center active work) and accumulating food because of shopping for food limitations and the interruption of work schedules brought about by the quarantine might bring about fatigue, which is related with expanded energy consumption.

The Danger factors related with intense respiratory trouble disorder and mortality in patients with Covid ailment 2019 Pneumonia in Wuhan, China, said Wu C. et al. (2020). https://doi.org/10.1001/jamainternmed.2020.0994. JAMA Assistant Prescription. 2020; https://doi.org/10.1001/jamainternmed.2020.0994. Nonetheless, this sugar instigated food needing impact is relative to the glycemic list of food varieties, which has been connected to an expanded danger of creating heftiness and cardiovascular sickness, notwithstanding an ongoing condition of irritation, which has been displayed to build the danger of more serious Coronavirus complexities.

As per Pugliese et al. (2020), unsavory encounters might bring about eating limitation because of physiological pressure reactions that take after the emotional sentiments related with taking care of incited totality. Also, ways of life might be essentially changed because of regulation endeavors, improving the probability of stationary conduct, smoking, and dozing designs adjustment. Various investigations have observed a connection between rest disturbances and stoutness because of expanded supportive of incendiary cytokine discharge by expanded instinctive fat tissue, which might add to the interruption of the rest wake cycle. As per

Scarmozzino F et al. (2020), this one of a kind situation with Coronavirus has upset every day schedules and changed dietary personal conduct standards around the world.

The COVID19 pandemic has quickly spread over the world, presenting grave dangers to general wellbeing, just as the amicable and monetary dependability of a few nations and areas. The unforeseen beginning of the worldwide wellbeing fiasco provoked a few researchers to pull together their exploration endeavors on pandemic-related areas. Various investigations have been led on the clinical parts of the Coronavirus 2019, including the comprehension of the Coronavirus 2019 pathogenic part, transmission ways, and various examples of sign improvement.

Various scientists and specialists have effectively distinguished stoutness; development; and comorbidities like cardiovascular sicknesses, threatening growths, and diabetes as hazard factors for SARS-CoV-19 contamination in SARS-CoV-19 patients. The SARS-CoV-19 casualty rate is assessed to be generally 4% of contaminated people, however shifts altogether across nations, going from 0% to 20%. Such a wide scope of loss missteps may be the result of an assortment of sectoral, financial, and policy centered issues one of a kind to individual nations. At last, it is vital to perceive that, because of the broad exertion embraced by analysts and drug organizations, the vaccination association is in progress all over the planet.

As examination from a clinical consideration point of view starts to give huge outcomes, the opportunity has arrived to zero in on the economy and the critical results the pandemic has had in this specific circumstance. Various scientists have effectively focused on the impact of the worldwide wellbeing crisis on monetary business areas, whose sharp changes during the pandemic caused chaos and weakness among monetary sponsor. Nonetheless, the impact of the SARS-CoV-19 pandemic on the condition of the clinical benefits industry has additionally as of late been illustrated. It has been expressed that the pandemic affected both the great and negative parts of the clinical consideration business. The pandemic's pernicious impact on the financial aspects of numerous nations has been noted in both nearby and worldwide terms.

The Total national output (Gross domestic product) guesses that the worldwide economy is contracting because of two basic factors. The first connects with the many types of disengagement forced by specialists, like social isolation, terminations of occasions and

corporate workplaces, and lockdowns. The second is the vulnerability to the seriousness of the circumstance. As indicated by figures given by the Worldwide Financial Asset (IMF), the worldwide Gross domestic product is assessed to have diminished by around 3.5 percent. Regardless, we ought to stress that the IMF's information uncovers colossal errors in the financial outcomes experienced by specific nations. These incongruities may be the outcome of two significant places. To start, how much the pandemic has hurt the financial matters of specific nations and how this analyzes to the SARS-CoV-19 pestilence's grievousness and death rates. The following element may be different limitations forced on specific nations, the openness of public transportation, and the connections made between the economy of different countries all through the pestilence.

CHAPTER III

Methodology

Research Designs

This research design included an observational review and a cross-sectional study that took place around the world from November 2019 to September 2020. The choice of a cross-sectional research was justified by the nature of the investigation, which covered a diverse population owing to differences in culture and viewpoint throughout the world. The dataset encompasses six continents, 170 nations, and their populations, with the goal of eliciting data that is generalizable, since Covid 19 spans all continents.

Source of the Data

This research used secondary data; the Covid 19 healthy diet dataset was retrieved from the Kaggle website.(https://www.kaggle.com/mariaren/covid19-healthy-diet-dataset? select=Fat Supply Quantity Data.csv), which was a platform managed by the (United States of America) government that included 170 countries and their populations, and the following data was compiled from several databases.

The following is a breakdown of the data compilation:

• The Food and Agriculture Organization of the United Nations FAO website contains data on food group supply quantities, nutrition values, obesity, and undernutrition percentages.

• The Population Reference Bureau PRB website contains data on population counts for each country.

• The Johns Hopkins Center for Systems Science and Engineering CSSE website contains data on COVID-19 confirmed, died, recovered, and active cases.

Techniques for Data Analysis

For analysis, the raw data extracted from the Kaggle electronic database was converted to an Excel spreadsheet. Prior to the statistical analysis procedure, missing data and outliers were identified and addressed. This research largely used univariate and multivariate regression analysis of data. The frequency and percentage data were analyzed qualitatively, while the mean, median, standard deviation, as well as the lowest and maximum statistics, were analyzed quantitatively. was utilized to compare the mean values of COVID 19 variables (Confirmed, Death, Recovered and Active cases). Due to the continuous nature of the COVID instances, the total mean rank differences were calculated. To evaluate determinants of COVID data death by continent, population, GDP per capita, and obesity, a multivariable linear regression analysis was done. All hypotheses were evaluated for significance at the 5% level. The Statistical Package for the Social Sciences (SPSS) version 26 was used for descriptive and inferential statistical analysis.

CHAPTER IV
Findings and Discussion

This chapter presents the findings based on the collected data.

Table 4.1: Data distribution: Continents

Continents		Frequency	Percent (%)
Valid	Africa	46	27.1
	Asia	42	24.7
	Europe	38	22.4
	North America	22	12.9
	Oceania	10	5.9
	South America	12	7.1
	Total	170	100.0

Table 4.1 reveals the percentage distribution of data by Continents 170 COVID dataset as a valid data and no missing data and out of which 27.1% of them are from Africa, 24.7% are from Asia, 22.4% are from Europe, 12.9% are from North America 7.1% of them are from South America, while 5.9% of them are from Ocenia. Also 27.1 percent of the whole population of the countries was Africa which denote the highest number of participants among the continents while the least was Ocenia 5.9 percent. This indicates that majority of the data was collected from the continent of Africa meaning that we have more Africans countries that participated in the research.

Table 4.2: Data distribution: GDP category

GDP category		Frequency	Percent (%)
Valid	3.45 million - 7.15 billion	34	20.0
	7.16 billion - 24.48 billion	35	20.6
	24.49 billion - 80.56 billion	37	21.8
	80.57 billion – 382.58 billion	35	20.6
	382.59 billion-19.8 trillion	29	17.1
	Total	170	100.0

Table 4.2 reveals percentage distribution of dataset by GDP Category that out of 170 COVID dataset, 21.8% of them are having a GDP of between 24.49 billion - 80.56 billion, 20.6 % of them are having a GDP of between 7.16 billion - 24.48 billion, 20.6 % of them are having a GDP of between 80.57 billion – 382.58 billion, 20% of them are having a GDP of between 3.45 million - 7.15 billion while 17.1 % of them are having GDP of between 382.59 billion-19.8

trillion. This implies that majority of the GDP categories recorded since the emergence of Covid 19 is between 24.49 billion - 80.56 billion.

Table 4.3: Data distribution: GDP growth

GDP growth		Frequency	Percent (%)
Valid	Negative Growth rate countries	15	8.8
	0-0.02 %	37	21.8
	0.021 -0.03 %	23	13.5
	0.031- 0.04%	32	18.8
	0.041-0.11%	63	37.1
	Total	170	100.0

Table 4.3 reveals percentage distribution of dataset by GDP growth and shows that out of 170 dataset recorded during the covid 19 era, 37.1% of the GDP growth rate recoded across continents ranged between 0.041-0.11%, 21.8% of them ranged 0-0.02%, 18.8% of the growth rate ranged between 0.031- 0.04% while 13.5% growth rate recoded ranged between 0.021 -0.03 %, while 8.8% of them ranged within the Negative Growth rate countries, This indicates that the highest GDP growth rate recorded during the COVID period ranged between 0.041-0.11%

Table 4.4: Data distribution: GDP Per-capita

GDP Per-capita		Frequency	Percent (%)
Valid	$ 0- $2499	53	31.2
	$ 2500 - $ 4999	26	15.3
	$ 5000 - $ 9999	31	18.2
	$ 10000 - $ 19999	25	14.7
	$20000 and above	35	20.6
	Total	170	100.0

Table 4.4 reveals percentage distribution of dataset by GDP Per-capita and shows that out of 170 dataset recorded during the Covid 19 era, 31.2% of the GDP per-capita recoded ranged between $ 0- $2499, 20.6% of them ranged between $20000 and above, 18.2% of them are ranged between $ 5000 - $ 9999, 15.3% of them are ranged between

$ 2500 - $ 4999 while 14.7% of them ranged between $ 10000 - $ 19999. This depicts that majority of the GDP per-capita recorded during the Covid 19 range between $ 0- $2499.

Table 4.5: Data distribution: Population category

Population Category		**Frequency**	**Percent (%)**
Valid	52,045-988,002	26	15.3
	988,003-9,904,896	61	35.9
	9,904,897- 19,653,969	26	15.3
	19,653,970-60,673,701	36	21.2
	60,673,702-1,421,021,791	21	12.4
	Total	170	100.0

Table 4.5 reveals percentage distribution of dataset by Population Category and shows that out of 170 dataset recorded during the Covid 19 era, 35.9% of the population recorded during the Covid 19 era ranged between 988,003-9,904,896, 21.2% of them ranged between 19,653,970-60,673,701, 15.3% of them ranged between 52,045-988,002, 15.3% of them ranged between 9,904,897 – 19,653,969, while 12.4% of them ranged between 60,673,702-1,421,021,791. This implies majority of the category of Population recorded during the Covid 19 era ranged between 988,003-9,904,896.

Table 4.6: Descriptive Statistics of Covid 19 Variables & Obesity

Quantitative data	**Confirmed**	**Death**	**Recovered**	**Active**	**Obesity**
Mean	2.022	.0394	1.45	.57	18.708
Median	1.14	.014	.517	.10	20.70
Std. Deviation	2.360	.0487	1.928	1.385	9.634
Minimum	.0003	.000	.000	0	2.1
Maximum	10.408	.185	9.0399	8	45.6
Sum	331.603	6.457	238.186	92	3124.2

Table 4.6 reveals the Mean of Covid Confirmed cases to be 2.022, Death cases to be .0394, Recovered cases 1.45, Active cases .57 and Obesity was 18.708, Median Covid Confirmed cases to be 1.14, Death cases to be .014, Recovered cases .517, Active cases .10 and Obesity was 20.70 Standard deviation of Covid Confirmed cases to be 2.360, Death cases to be .0487, Recovered cases 1.928, Active cases 1.385 and Obesity was 9.634, Minimum of Covid Confirmed cases to be .0003, Death cases to be 0, Recovered cases 0, Active cases to be 0 and Obesity was 2.1, Maximum of Covid Confirmed cases to be 10.408, Death cases to be .185, Recovered cases 9.0399, Active cases 8 and Obesity was 45.6. Also Covid number cases (Confirmed, Death, Recovered, Active & Obesity) shows the outbreak of pandemic, a total of 331 cases was confirmed, 6 death cases, 238 recovered cases, active cases is 92, while 3124 of the sample across continents were found to be obese. An average of Covid 19 Confirmed cases per-day was 2, Death cases recorded per-day was less than 1, average of Recovered case was 1, while less than 1 Active case was found perday. However, an average of Covid 19 cases found to be Obese is 18.

Test of Hypotheses

Table 4.7 : Descriptive Statistics of Covid 19 Confirmed cases based on Continents

	Continent	N	Mean	Median	SD	Minimum	Maximum	p
Confirmed Cases	**Africa**	46	0.440	0.1427	0.640	8.52e-4	2.59	<0.0001
	Asia	42	1.557	0.8397	1.845	6.21e-4	7.44	
	Europe [a,b]	38	4.737	4.2983	2.204	0.8548	10.41	
	N. America [c]	22	1.660	0.8848	2.243	0.0741	8.16	
	Oceania [c]	10	1.088	0.0793	1.564	3.12e-4	4.65	
	S. America [a]	12	2.559	2.0341	1.462	0.4526	4.46	

[a] Significant difference from Africa

[b] Significant difference from Asia

[c] Significant difference from Europe

Table 4.7: shows that there is a significant difference in the number of Covid 19 Confirmed cases based on Africa, Asia & Europe Continents since $p<0.0001$. Hence the null hypothesis is rejected. The table further reveals that the continent with the highest average number of Confirmed cases was Europe (mean= 4.737), South America (mean= 2.559), North America (mean= 1.660), Asia (mean= 1.557), Oceania (mean= 1.088) and Africa (mean= 0.440).

Figure I: Box and Whisker Plot on COVID-19 Confirmed cases based on Continents

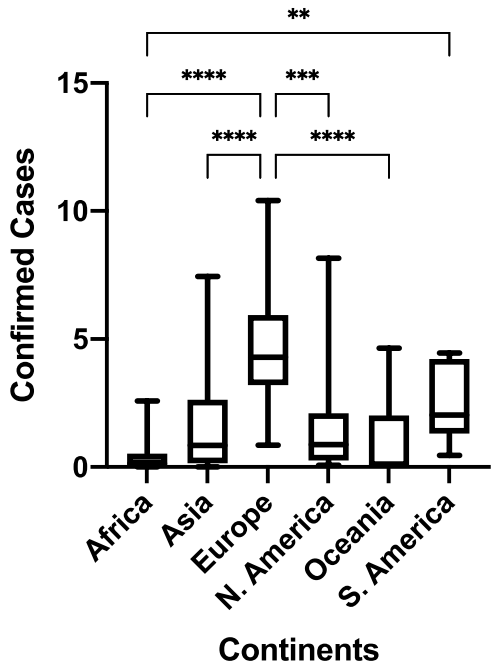

Figure I shows Pairwise comparison which shows significant difference between Asia & Europe; Europe & Oceania; Africa& Europe; Europe & N.America; and Africa& S.America and COVID-19 Confirmed cases

Table 4.8 : Descriptive Statistics of Covid 19 Dead cases based on Continents

	Continent	N	Mean	Median	SD	Minimum	Maximum	p
Dead Cases	**Africa**	46	0.0103	0.00278	0.0196	3.52e-5	0.0857	<0.0001
	Asia	42	0.0217	0.01006	0.0296	0.00000	0.1509	
	Europe [a,b]	38	0.0930	0.09588	0.0482	0.00788	0.1854	
	N. America [c]	22	0.0352	0.01130	0.0448	0.00000	0.1401	
	Oceania [c]	10	0.0222	0.00202	0.0328	0.00000	0.0999	
	S. America [a]	12	0.0649	0.06556	0.0462	0.00429	0.1278	

[a] Significant difference from Africa

[b] Significant difference from Asia

[c] Significant difference from Europe

Table 4.8: shows that there is a significant difference in the number of Covid 19 Dead cases based on Africa, Asia & Europe Continents since $p<0.0001$. Hence the null hypothesis is rejected. The table further reveals that the continent with the highest average number of Dead cases was Europe (mean= 0.0930), South America (mean= 0.0649), North America (mean= 0.0352), Asia (mean= 0.0217), Oceania (mean= 0.0222) and Africa (mean= 0.0103).

Figure 2: Box and Whisker Plot on COVID-19 Dead cases based on Continents

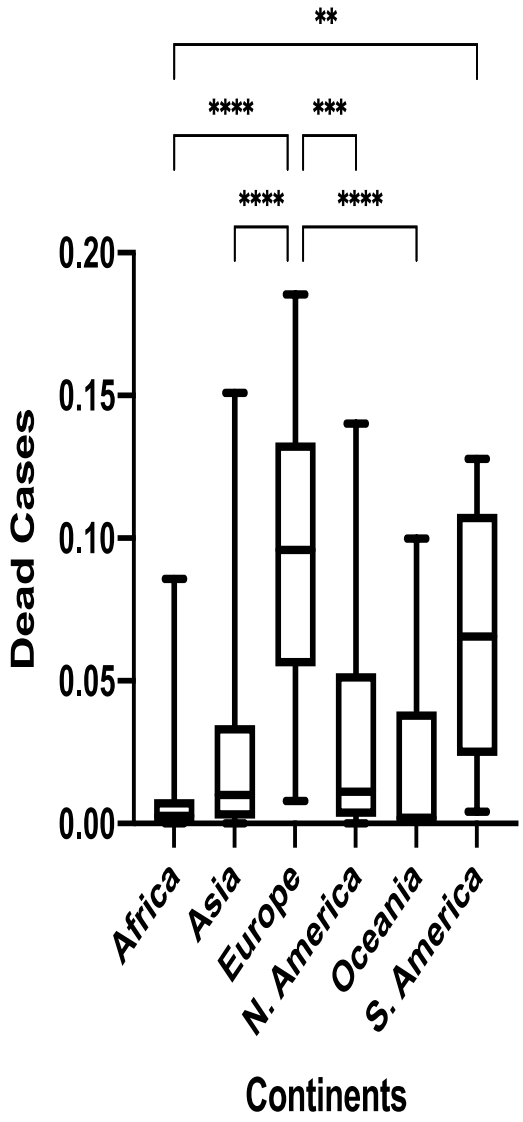

Figure 2 shows Pairwise comparison which shows significant difference between Asia & Europe; Europe & Oceania; Africa& Europe; Europe & N.America; and Africa& S.America and COVID-19 Dead cases

Table 4.9 : Descriptive Statistics of Covid 19 Recovered cases based on Continents

	Continent	N	Mean	Median	SD	Minimum	Maximum	p
Recovered Cases	**Africa**	46	0.373	0.1200	0.575	3.06e-4	2.46	<0.0001
	Asia	42	1.310	0.6610	1.645	5.66e-4	6.81	
	Europe [a,b]	38	3.049	28.634	2.466	0.000	9.04	
	N. America	22	1.036	0.4754	1.543	0.000	6.77	
	Oceania [c]	10	0.885	0.0730	1.386	3.12e-4	4.33	
	S. America [a,e]	12	2.267	15.701	1.386	0.424	4.09	

[a] Significant difference from Africa

[b] Significant difference from Asia

[c] Significant difference from Europe

[e] Significant difference from Oceania

Table 4.9: shows that there is a significant differences in the number of Covid 19 Recovered cases based on Africa, Asia, Europe & Oceania Continents since $p<0.0001$. Hence the null hypothesis is rejected. The table further reveals that the continent with the highest average number of Recovered cases was Europe (mean= 3.049), South America (mean= 2.267), Asia (mean= 1.310), North America (mean= 1.036), Oceania (mean= 0.885) and Africa (mean= 0.373).

Figure 3: Box and Whisker Plot on COVID-19 Recovered cases based on Continents

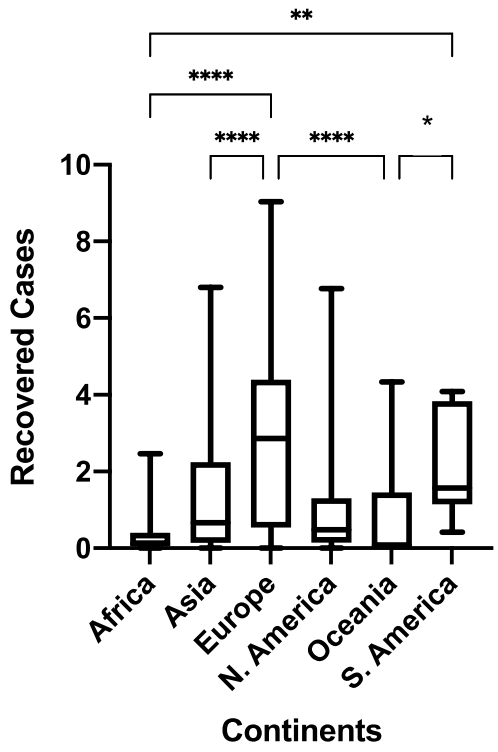

Figure 3 shows Pairwise comparison which shows significant difference between Asia & Europe; Europe & Oceania; Oceania & S.America; Africa & Europe and Africa & S.America and COVID-19 Recovered cases

Table 4.10 : Descriptive Statistics of Covid 19 Active cases based on Continents

	Continent	N	Mean	Median	SD	Minimum	Maximum	p
Active Cases	**Africa**	46	0.0564	0.01759	0.0875	5.11e-4	0.372	<0.0001
	Asia	42	0.3596	0.03190	0.9405	0.00000	5.523	
	Europe [a,b]	38	15.948	0.62484	20.496	0.00897	6.101	
	N. America [a,c]	22	0.6077	0.10179	16.813	8.85e-4	8.020	
	Oceania [c]	10	0.1930	0.00427	0.2677	0.00000	0.569	
	S. America [a]	12	0.2643	0.23070	0.1793	0.02390	0.569	

[a] Significant difference from Africa

[b] Significant difference from Asia

[c] Significant difference from Europe

Table 4.10: reveals that there is a significant differences in the number of Covid 19 Active cases based on Africa, Asia &Europe Continents since $p<0.0001$. Hence the null hypothesis is rejected. The table further shows that the continent with the highest average number of Active cases was Europe (mean= 15.948), North America (mean= 0.6077), Asia (mean= 0.3596), South America (mean= 2.267), , Oceania (mean= 0.885) and Africa (mean= 0.373).

Figure 4: Box and Whisker Plot on COVID-19 Active cases based on Continents

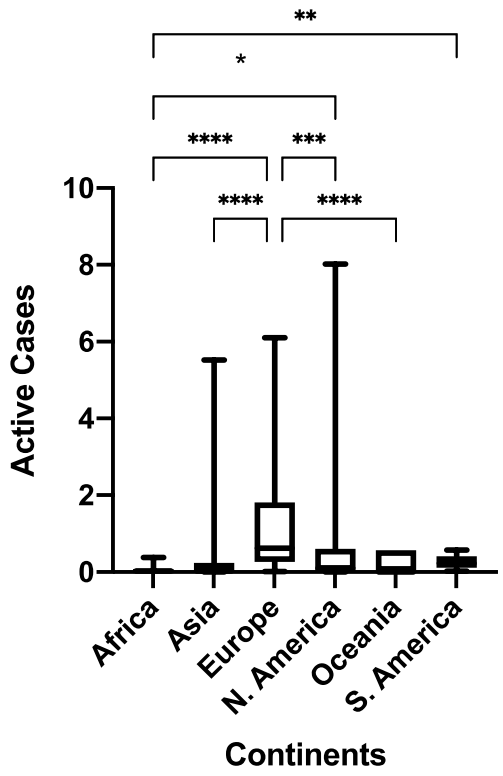

Figure 4 shows Pairwise comparison which shows significant difference between Asia & Europe; Europe & Oceania; Africa& Europe; Europe & N.America; Africa & N.America and Africa & S.America and COVID-19 Active cases

Table 4.11 : Descriptive Statistics of Covid 19 Confirmed cases based on GDP per Capita

	GDP per Capita	N	Mean	Median	SD	Minimum	Maximum	p
Confirmed Cases	**0-2.499 $**	53	0.331	0.140	0.520	6.21e-4	2.02	<0.0001
	2.500-4.999 $ [a]	26	1.811	1.165	1.934	3.12e-4	7.04	
	5.000-9.999 $ [a]	31	2.207	1.579	2.087	0.00625	10.41	
	10.000-19.999 $ [a]	25	2.834	2.865	2.121	0.04617	7.62	
	20.000 $ and above [a,b]	35	3.996	3.625	2.740	0.00391	9.61	

[a] Significant difference from 0-2.499 $ category

[b] Significant difference from 2.500-4.999 $ category

Table 4.11: shows that there is a significant difference in the number of Covid 19 Confirmed cases based on GDP Per-capita income of 0-2499$ and 2500-4999$ category since p<0.0001. Hence the null hypothesis is rejected. The table further reveals that the GDP per-capita income of people with the highest average number of confirmed cases are those between 20000$ and above (mean= 3.996), followed by those between 10000-19999$ (mean= 2.834), 5000-9999$ (mean= 2.207), 2500-4999$ (mean= 1.811), and 0-2499$ (mean= 0.331).

By implication the GDP per-capita of an individuals determine the Confirmed cases of the pandemic.

Figure 5: Box and Whisker Plot on COVID-19 Confirmed cases based on GDP per capita

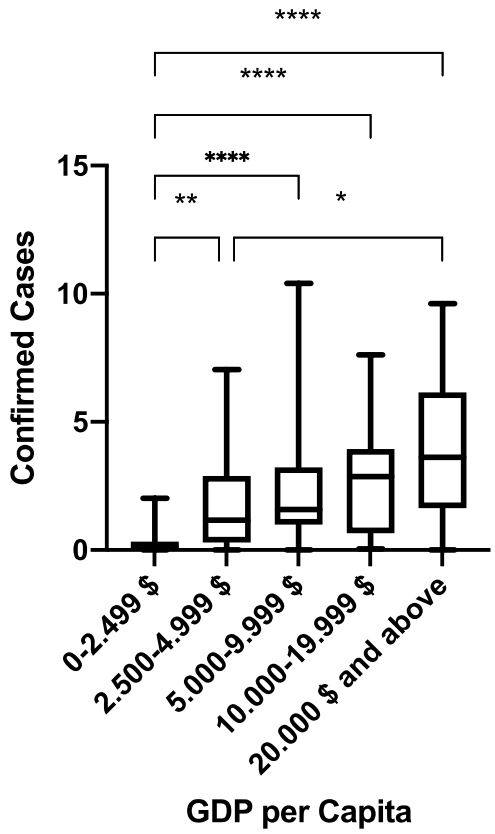

Figure 5 shows Pairwise comparison which shows significant difference between 0-2499$ & 2500-4999$; 2500-4999$ & 20000$ and above; 0-2499$ & 5000-4999$; 0-2499$ & 10000-19999$ and 0-2499$ and 20000$ & above and COVID-19 Confirmed cases

Table 4.12 : Descriptive Statistics of Covid 19 Dead cases based on GDP per Capita

	GDP per Capita	N	Mean	Median	SD	Minimum	Maximum	p
Dead Cases	**0-2.499 $**	53	0.00623	0.00187	0.0103	0.00	0.0394	<0.0001
	2.500-4.999 $ [a]	26	0.03407	0.02505	0.0317	0.00	0.1053	
	5.000-9.999 $ [a]	31	0.05099	0.02668	0.0522	0.00	0.1455	
	10.000-19.999 $ [a]	25	0.05533	0.05112	0.0467	0.00	0.1334	

Table 4.12 : Descriptive Statistics of Covid 19 Dead cases based on GDP per Capita

	GDP per Capita	N	Mean	Median	SD	Minimum	Maximum	p
	20.000 $ and above [a]	35	0.07181	0.05502	0.0584	3.81e-5	0.1854	

[a] Significant difference from 0-2.499 $ category

Table 4.12: shows that there is a significant difference in the number of Covid 19 Dead cases based on GDP Per-capita income of 0-2499$ category since $p<0.0001$. Hence the null hypothesis is rejected. The table further reveals that the GDP per-capita income of people with the highest average number of Dead cases are those between 20000$ and above (mean= 0.0781), followed by those between 10000-19999$ (mean= 0.05533), 5000-9999$ (mean= 0.05099), 2500-4999$ (mean= 0.03407), and 0-2499$ (mean= 0.00623).

So we can say the GDP per-capita of an individuals determine the Dead cases of the pandemic.

Figure 6: Box and Whisker Plot on COVID-19 Dead cases based on GDP per capita

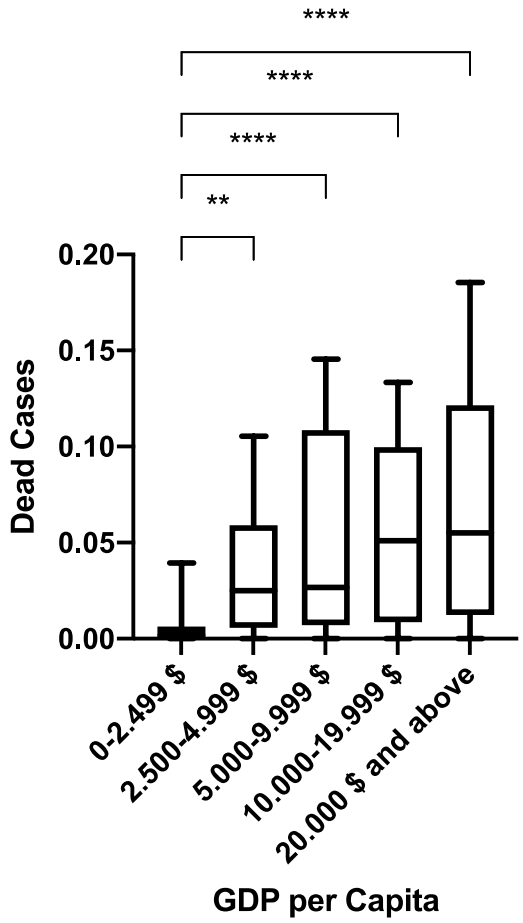

Figure 6 shows Pairwise comparison which shows significant difference between 0-2499$ & 2500-4999$; 0-2499-5000-9999$; 0-2499$ & 10000-19999$; 0-2499$ & 20000$ & above and COVID-19 Dead cases.

Table 4.13 : Descriptive Statistics of Covid 19 Recovered cases based on GDP per Capita

	GDP per Capita	N	Mean	Median	SD	Minimum	Maximum	p
Recovered Cases	**0-2.499 $**	53	0.253	0.111	0.381	3.06e-4	1.45	
	2.500-4.999 $ [a]	26	1.413	0.854	1.685	0.00000	6.81	<0.0001
	5.000-9.999 $ [a]	31	1.853	1.452	1.826	0.00592	9.04	

Table 4.13 : Descriptive Statistics of Covid 19 Recovered cases based on GDP per Capita

	GDP per Capita	N	Mean	Median	SD	Minimum	Maximum	p
	10.000-19.999 $ [a]	25	2.350	2.700	1.926	0.04269	6.77	
	20.000 $ and above [a]	35	2.303	1.619	2.493	0.00000	8.56	

[a] Significant difference from 0-2.499 $ category

Table 4.13: shows that there is a significant difference in the number of Covid 19 Dead cases based on GDP Per-capita income of 0-2499$ category since p<0.0001. Hence the null hypothesis is rejected. The table further reveals that the GDP per-capita income of people with the highest average number of Dead cases are those between 20000$ and above (mean= 0.0781), followed by those between 10000-19999$ (mean= 0.05533), 5000-9999$ (mean= 0.05099), 2500-4999$ (mean= 0.03407), and 0-2499$ (mean= 0.00623).

In conclusion, the GDP per-capita of an individuals determine the their rate of recovery.

Figure 7: Box and Whisker Plot on COVID-19 Recovered cases based on GDP per capita

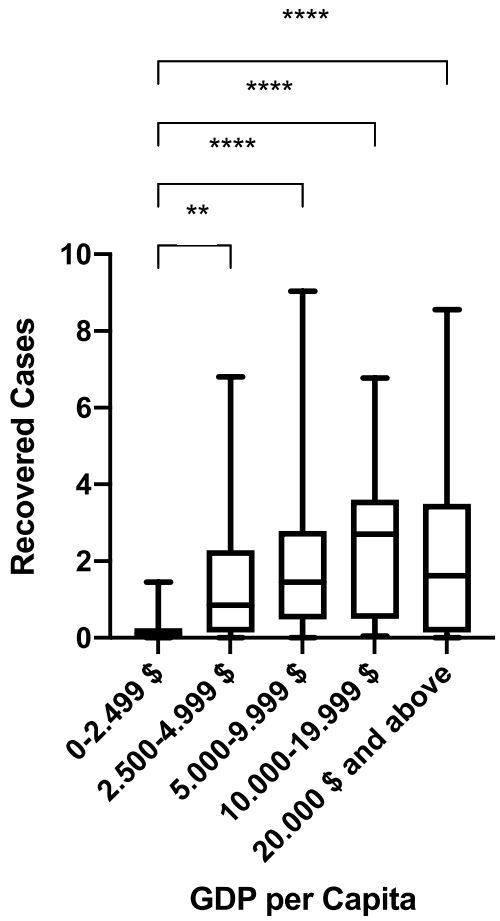

Figure 7 shows Pairwise comparison which shows significant difference between 0-2499$ & 2500-4999$; 0-2499$ & 5000-9999$; 0-2499$ & 10000-19999$; 0-2499$ & 20000$ & above and COVID-19 Recovered cases.

Table 4.14 : Descriptive Statistics of Covid 19 Active cases based on GDP per Capita

	GDP per Capita	N	Mean	Median	SD	Minimum	Maximum	p
Active Cases	**0-2.499 $**	53	0.1Z8	0.0126	0.769	0.00	5.52	<0.0001
	2.500-4.999 $	26	0.364	0.0643	1.130	0.00	5.78	
	5.000-9.999 $ [a]	31	0.304	0.1625	0.368	1.12e-4	1.66	

Table 4.14 : Descriptive Statistics of Covid 19 Active cases based on GDP per Capita

GDP per Capita	N	Mean	Median	SD	Minimum	Maximum	p
10.000-19.999 $ [a]	25	0.449	0.2958	0.555	8.85e-4	2.43	
20.000 $ and above [a,b]	35	1.635	0.5693	2.322	3.05e-4	8.02	

[a] Significant difference from 0-2.499 $ category

[b] Significant difference from 2.500-4.999 $ category

Table 4.14: shows that there is a significant difference in the number of Covid 19 Active cases based on GDP Per-capita income of 0-2499$ and 2500-4999$ category since $p<0.0001$. Hence the null hypothesis is rejected. The table further reveals that the GDP per-capita income of people with the highest average number of Active cases are those between 20000$ and above (mean= 1.635), followed by those between 10000-19999$ (mean= 0.449), 2500-4999$ (mean= 0.364), 5000-9999$ (mean= 0.304), and 0-2499$ (mean= 0.178).

In conclusion, the GDP per-capita of an individuals determine the Active rate of the pandemic.

Figure 8: Box and Whisker Plot on COVID-19 Active cases based on GDP per capita

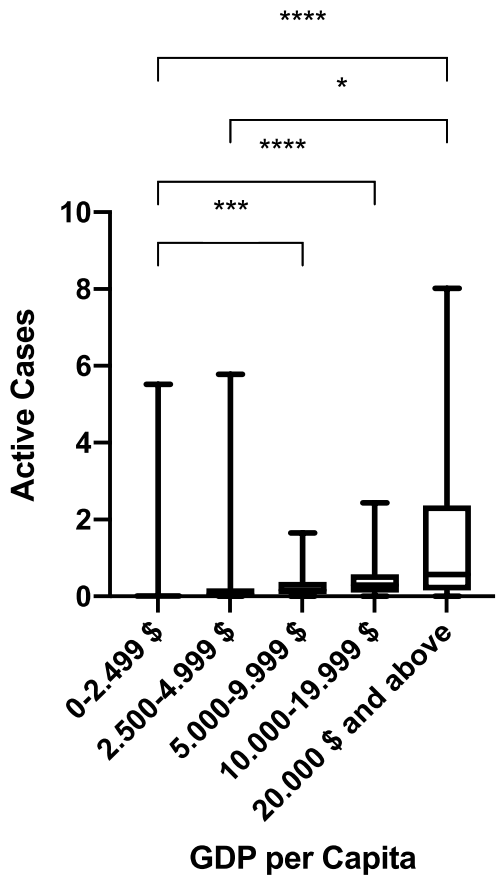

Figure 8 shows Pairwise comparison which shows significant difference between 0-2499$ & 5000-9999$; 0-2499$-10000-19999$; 2500-4999$ & 20000$ &above ; 0-2499$ & 20000$ & above and COVID-19 Active cases.

Table 4.15: Correlation matrix showing the relationship between GDP per capita & COVID 19 Variables .

Variables	Mean	Std.Dev	1	2	3	4	5
GDP per-capital	13447.4	18354.2	1.000				
Covid 19 Confirmed	2.02	2.36	.477**	1.000			
Covid 19 Death	.039	.049	.363**	.861**	1.000		
Covid 19 Recovered	1.45	1.93	.272**	.821**	.672*	1.000	
Covid 19 Active	.57	1.39	.416**	.516**	.486*	-.032	1.000

*Correlation is significant at 0.01 (2-tailed)

Table 4.15 revealed the significant relationship between independent variable (GDP per capita) with the dependent variables (Covid 19 Confirmed, Death, Recovered, and Active cases); GDP per capita is positively correlated with number of COVID Variables Confirmed cases (r = .477, P<0.01), number of Covid 19 Death cases (r = .363, P<0.01), Covid 19 Recovered cases (r = .272, P<0.01) and number of Covid 19 Active cases (r= .416, p< 0.01). The coefficient of determination (r^2 values) of the variables indicated that the increase in the influence of GDP per capita will increase the number of Covid 19 Confirmed (r^2= 0.228), Death (r^2= 0.132), Recovered cases (r^2= 0.074) and Active (r^2= 0.173), by 22.8%, 13.2%, 7.4% and 17.3% respectively.

Table 4.16: Summary of regression for the joint contributions of independent variables (GDP growth, Population, GDP per capita & Obesity**)** to the prediction of COVID 19 Death.

R =.514
R Square =.264
Adjusted R square =.246
Std. Error = .0415437

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	.102	4	.026	14.790	.000[b]
	Residual	.285	165	.002		
	Total	.387	169			

Table 4.16 reveals significant joint contribution of the independent variables (GDP Growth, Population, GDP per capita & Obesity **)** to the prediction of COVID 19 Death. The result yielded a coefficient of multiple regressions R = 0.514 and multiple R-square = 0.264, it shows that 26.4% variation in dependent variables (COVID Death**)** is explained by the independent variables (GDP growth, Population, GDP per capita & Obesity **)**. The table also suggests that the five factors combined accounted for 26.4% (Adj.R^2= .246) variance in the prediction of COVID 19 Death. The other factors accounting for the remaining variance are beyond the scope of this study. The ANOVA result from the regression analysis shows that there was a significant effect of the independent variables on the COVID 19 Death, F (4, 165) = 14.790, P<0.01.

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4.17: Relative effect of the independent variables (GDP growth, Population, GDP per capita & Obesity**)** to the prediction of COVID 19 Death.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.011	.008		-1.288	.200
	GDP Growth	.001	.001	.105	1.524	.129
	Population	6.095E-12	.000	.020	.288	.774
	GDP per capita	5.230E-7	.000	.201	2.751	.007
	Obesity	.002	.000	.415	5.465	.000

Table 4.17 shows that two out of five predictors **(**GDP per capita and Obesity**)** are potent predictors of COVID 19 Death among patients. The strongest factor was Obesity (Beta = .415, t= 5.465, P<0.01), and GDP per capita (Beta = .201, t= 2.751, P<0.01). While, GDP growth (Beta = .105, t= 1.524, P>0.01), and Population (Beta = .020, t = .288, P>0.01) are not significant predictors of Covid 19 Death. This implies that Obesity and GDP Per capita accounts for increase in patients' COVID 19 Death by 41.5%, and 20.1% respectively.

CHAPTER V

Discussion

This study was carried out in order to examine the impact of dietary habits on COVID - 19 Pandemic on Continents, Gross Domestic Products and Population. This thesis is composed of six chapters each of them dealing with different aspects. Chapter I presents overview about introduction which include Background to the study, Statement of the problem, Purpose of the study, Research questions, Significance of the study, Limitations of the study and Definition of terms. Chapter II examines the Literature review Chapter III is on Methodology which include Research Design, Data Sources and Analysis Methods. Chapter IV focuses on Findings and Discussions, which includes Data distribution of Continents, GDP Category, GDP growth, GDP per capita, Population Category, Descriptive Statistics for Qualitative Data which include estimation of Frequency and Percentage, Descriptive Statistics for Quantitative Data (COVID-19 Variables & Obesity) which include estimation of Mean, Median, Standard deviation, Minimum, Maximum, Sum, Test of Hypothesis on COVID-19 Variables based on Six Continents across the world and GDP per capita, both Continents and Gross Domestic Products per capita were estimated using pair comparison, Test of Correlation were used to estimate relationship between independent variable (GDP per capita) and COVID-19 Variables, Linear regression were tested for both significant joint contributions of independent variables (GDP growth, Population, GDP per capita & Obesity**)** to the prediction of COVID-19 dependent variable (Deaths) and relative effect of the independent variables (GDP growth, Population, GDP per capita & Obesity**)** to the prediction of COVID-19 dependent variable (Deaths) and Chapter V comprises of Discussion and Chapter VI talks about Conclusion & Recommendations for further studies.

This research has some shortcomings namely unreliable data and as a result of this researcher need to dig a little bit deeper to get a broader view of the data and also the agency in charge need to specifically state the origin of the data so that data user will have trust on the data and thereby rely on it for analysis; Lack of quality of data and as a result of this government in charge should seek to provide raw data and work with third party to build cleaner and more usable dataset for everyone; Incomplete information and government can seek for the skilled analyst who will be able to make the data to be more user friendly and also complete and The

data may not suit the purpose of your study or fulfill researchers need and because of this researcher need to consider using another data for his research.

Also World Health Organization(WHO) recently was concerned about the rapid and increase in cases of COVID-19 that was recorded in Europe and said this is attributed to climatic condition (winter season) as it breeds more cases; Vaccine coverage not sufficient, Waning immunity among those that are immunized early, Regional dominance, Complacency about mask and Also there is no strict government law on social distancing rules.

CHAPTER VI

Conclusion and Recommendations

This part reaches determinations and makes ideas in light of the review results.

Conclusion

The accompanying end was reached in light of the information of this review:

1. That the majority of information got for the exploration came from Africa landmasses, suggesting that a greater number of African countries took part in the review.
2. That the majority of Gross Domestic Product classes detailed since Coronavirus fall inside the scope of 24.49 billion to 80.56 billion.
3. That the Coronavirus time frame's greatest Gross Domestic Product development rate was between 0.041-0.11 percent.
4. The heft of Gross Domestic Product per capita saw during Coronavirus falls inside the scope of $2499.
5. During the Coronavirus time frame, most of the Populace classification was somewhere in the range of 988,003 and 9,904,896.
6. That the normal number of Coronavirus Confirmed cases each day was two, the normal number of Death cases each day was short of what one, and the normal number of Recuperated cases was one, while less than one Dynamic case was found every day. In any case, the normal period of Coronavirus patients determined to have weight is 18
7. Since the invalid speculation is dismissed, there is a significant variety in the quantity of Coronavirus Confirmed cases per landmass.
8. Since the invalid speculation is dismissed, there is a significant variety in the quantity of Coronavirus Passing cases per landmass.
9. Since the invalid speculation is dismissed, there is a significant variety in the quantity of Coronavirus Recuperated cases per landmass.
10. Since the invalid theory is dismissed, there is a significant variety in the quantity of Coronavirus Dynamic cases by landmass.

11. Since the invalid theory is dismissed, there is a significant distinction in the quantity of Coronavirus Confirmed cases by Gross Domestic Product per capita.
12. Since the invalid theory is dismissed, there is a significant distinction in the quantity of Coronavirus Passing cases by Gross Domestic Product per capita.
13. Since the invalid speculation is dismissed, there is a significant variety in the quantity of Coronavirus Recuperated cases relying upon Gross Domestic Product per capita.
14. Since the invalid theory is dismissed, there is a significant variety in the quantity of Coronavirus Dynamic cases by Gross Domestic Product per capita.
15. That a critical affiliation existed between the autonomous variable (Gross Domestic Product per capita) and the reliant variable (Coronavirus Confirmed, Demise, Recuperated and Dynamic cases.
16. The Correlation Test set up reveal a positive relationship between Gross Domestic Product per capita and the quantity of Coronavirus Factors Confirmed, Passing, Recuperated and Dynamic cases.
17. The Regression examination exhibits a critical joint commitment of the autonomous factors (Gross Domestic Product Development, Populace, Gross Domestic Product per capita, and Weight) to the forecast of Coronavirus Passing and moreover, the ANOVA result from the regression further shows a huge impact of the free factors on Coronavirus Demise.
18. Further testing of the regression analysis demonstrates that the autonomous factors (Gross Domestic Product development, Populace, Gross Domestic Product per capita, and Weight) had no critical relative commitment to the forecast of Coronavirus Passing among Coronavirus patients.

Recommendations According to Findings

Based on the above outcomes, the accompanying ideas are made:

1. States should go to more safeguard lengths to limit Coronavirus cases across landmasses.

2. The public authority ought to extend medical care offices, for example, emergency clinics and separation focuses, especially in provincial regions, to lessen Coronavirus passing cases among occupants around the world.

3. States should guarantee that inoculations are effectively open and accessible to all residents on all landmasses and furthermore establish regulation commanding immunization to end the spread of lethal illnesses.

4. The public authority should really bend over backward to expand the Gross domestic product per capita of the country, since this impacts the economy and along these lines on the residents.

5. In case of one more infection sooner rather than later, it is basic for the public authority to go to quick and proper lengths to keep the infection from spreading, like shutting borders, forbidding get-togethers, establishing a law, and forcing a gigantic and serious punishment on anybody saw as at real fault for abusing any administration law.

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