

Short Article

Geographical & Demographical Changes: Effects on Global Health

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DOI: <https://doi.org/10.24321/2348.2133.202009>

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How to cite this article:

Mathew P. Geographical & Demographical Changes: Effects on Global Health. *Ind J Holist Nurs* 2020; 11(1): 1-5.

Date of Submission: 2020-12-11

Date of Acceptance: 2020-12-29

A B S T R A C T

The corona virus COVID-19 is affecting 218 countries and territories around the world and 2 international conveyances. COVID-19 is fundamentally changing community and social life. In India, the epidemic has expanded its footprint. Demographic changes are the dynamics in the quantifiable statistics of a given population. The demographic characteristics and healthcare systems can dramatically influence a disease's spread and its impact on peoples. People across the globe are fighting it bravely with around 80% of the sick people recovering completely from it. The death rate is a mere 2%. It is a cause of concern however for seniors and immune compromised individuals. The upshot of pandemic on global health are, physical and mental health challenges, striving diseases by senior citizens with poor recovery, patients goes to critical stages due to co morbid disorders etc. With all the scare around, corona virus is not a death sentence for most people. Things are changing everywhere every day. We will get through this soon.

Keywords: COVID-19, Demography, Topography, Global Health

Introduction

The World Health Organization has noted the novel Corona virus as a pandemic for the first time. The outbreak of 2019 novel corona virus disease (COVID-19) was first reported on December 31, 2019, in Wuhan, China. After a week, the virus had rapidly spread throughout China and within a month to several other countries including Italy, the United States and Germany. Outbreaks have been stated in more than 110 countries with more than 118,000 confirmed cases and 4,200 deaths worldwide during those days. This chain of events started with an "outbreak"-a sudden spike in confirmed cases of a disease contained to a small geographic sector like Wuhan. The new species have a global distribution and are commonly associated with animal reservoirs. Their emergence is often driven by ecological changes, especially with how human populations interact with animal reservoirs. In a global pandemic, demographic

characteristics and healthcare systems can dramatically influence a disease's spread and its impact on peoples.¹

Demography and Topography: Pandemic COVID-19

The Corona virus COVID-19 is spread over 202 countries and provinces around the globe and 2 International conveyances: The Diamond Princess Cruise ship harbored in Yokohama, Japan and the Holland America's MS Zaandam cruise ship.

- Global Cases: 68,567,526, Death:1,563,130, Recovered Cases:47,462,104.The Currently infected patients: 19,542,293& Critical Cases: 106,411 (World Health Organization, 9 December, 2020).
- COVID-19 fatality rates by age are more common above the age of 51 years.
- COVID-19 fatality rates by sex are more common among males.

- COVID-19 fatality rates by comorbidity rates with pre-existing conditions like diabetes mellitus, hypertension, chronic respiratory diseases and cancer are high.
- Pollution and green house gas emissions have fallen across the countries as they try to contain the spread of new corona virus.
- Smoking is another major factor associated with higher fatalities in Italy and South Korea.
- Type of climates, landforms, vegetation, soils and water are a major aid of corona outbreak in all countries.
- The enterprise of wild animals for pharmaceuticals, pets, and scientific evidence based research led corona virus spread in China.
- The habit of eating zoonotic food by China and Thailand people is the origin.
- The mode of transmission in all countries through people with the history of National & international travelling and also migration.
- The evidence is there that individuals with different ABO blood groups would differ in their susceptibility or resistance to corona virus infection, especially in china. People with Blood Type 'A' are more prone to get Corona virus, 'O' at low risk.
- Western and African expatriates in China were reported to face increased racial hostility and discrimination in response to a shift of Chinese-based Covid-19 cases from local to imported cases.
- Huge spike of mortality and morbidity rate of covid-19 cases in the US and Italy.
- The better stability of SARS Corona virus at low temperature and low humidity environment may facilitate its transmission in community in subtropical area (such as Hong Kong) during the spring and in air-conditioned environments. It may also explain why some Asian countries in tropical area (such as Malaysia, Indonesia or Thailand) with high temperature and high relative humidity environment did not have major community outbreaks of SARS.
- India's risks of spreading the virus are disproportionately in high range because of its high population density, creaky healthcare mechanism and high internal migration.
- A new corona virus mutation is taking over the world. A mutation in the protein that allows SARS-CoV-2 to enter cells might make it easier for the virus to spread—or it might not make a difference at all.
- Virus particles with this mutation have an easier time making their way into cells, suggesting that it is out competing other strains of the virus to become the dominant version of SARS-CoV-2.¹

Circumstances: Covid-19 a Picture of India

The spread of novel corona virus in India has created panic attack among people in the country. After the first

confirmed positive case was reported on January 30th 2020 at Kerala, the epidemic has expanded its footprint in the country, affecting 1,2,3,4 people. While the Centre and state governments have been trying hard to check the spread of corona Virus by tracking, isolating and treating the infected persons, the gradual increase of the epidemic in India is pathetic.

Prime Minister Narendra Modi announced on 19th March 2020 a Janta Curfew on 22nd March 2020 which was the beginning of a long battle against Corona virus outbreak and he has proved that altogether people can beat any challenges. On 24 March 2020, again he announced a nationwide lockdown for 21 days, controlling the movement of the entire 1.3 billion population of India as a primordial preventive measure towards the Covid-19. The lockdown was placed when the mortality of confirmed positive Corona virus cases in India was approximately 500.

Forthwith, amid the surge in corona virus cases, some states have introduced restrictions and curfews in districts that have witnessed a rise in infection. While some states have imposed night curfews in the worst affected districts, others have regulated the timings of market places. The data shows: Active Covid-19 cases: (9,735, 975), Cured/ Discharged/Migrated Cases: (9,215,581), Death:(141388) and Critical (8,944).²

Seed of Corona Virus: Across the Planetary

The first identified case of the novel corona Virus was traced back to 1st December 2019 in Wuhan, Hubei, China. The first case was a 55-year-old man who had illness on 17 November 2019. Within the next month, the number of Corona virus cases in Hubei progressively raised to a couple of hundred, before rapidly increasing in January 2020. On 31st December 2019, enough cases of unknown pneumonia had been reported to health force in Wuhan, the capital of Hubei province, to spark an investigation. These were mostly linked to the Huanan Seafood Wholesale Market, which also sold live animals; thus, the virus is thought to have a zoonotic virus. Iran reported its first confirmed case of SARS-CoV-2 infections on 19 February in Quom, where, according to the Ministry of Health & Medical Education, two people died later that day itself. In early and mid-January 2020, the virus spread to other Chinese territories, helped by the Chinese New Year Migration and Wuhan being a transport hub and major rail interchange. The virus was confirmed to have spread to France on 24th January 2020, when the first COVID-19 case in Europe and France was confirmed in Bordeaux. Its identified a 48-year-old French citizen who have reached in France from China. On 20th January 2020, China reported nearly 140 fresh cases in a day, including two people in Beijing and one in Shenzhen. On 13th January 2020, the first known condition of the virus outside China was confirmed in

Thailand, being that of a Chinese traveler. COVID-19 was confirmed to have spread to South Korea on 20 January 2020 from China. The first known victim the United States of COVID-19 was confirmed in the Pacific Northwest state of Washington on 20th January 2020, in a man who had returned from Wuhan on 15th January 2020. The virus was confirmed to have been transmitted to Germany on 27th January 2020, when the first COVID-19 case was confirmed in Bavaria. The first case confirmed in India on 30th January 2020, in the state of Kerala at Pathanamthitta District. The cases were reported from travelers reached from China and Italy and their contacts. On 30th January 2020, the WHO announced the outbreak to be a Public health emergency of International concern, warning that “all countries should be planned for containment, including active surveillance, early detection, isolation and case management, contact tracing and prevention of onward spread” of the virus. The outbreak was confirmed to have spread to Italy on 31st January 2020, when two Chinese tourists tested positive for SARS-CoV-2 in Rome. The 2019-20 Corona virus pandemic was confirmed to have spread to Spain on 31 January 2020, when a German tourist tested confirmed for SARS-CoV-2 in La Gomera, Canary Islands. On 11th March, the WHO officially announced the Corona virus outbreak to be a pandemic, following a period of sustained community-level transmission in many regions divisions of the world. On 13 March, the WHO declared Europe to be the new centre of the pandemic after the rate of new European cases outmatched that of regions of the world apart from China. Around 200 countries and territories have had at least a single case. Due to the pandemic in Europe, many countries in the Schengen Area have restricted free movement and set up border controls. National reactions have included containment measures such as quarantines and curfews. The United Kingdom response to the virus first emerged as one of the most relaxed of the affected countries, and until 18 March 2020, the British government did not place any form of social isolation and distancing.³

On 24th March 2020, more than 158 million people are in lockdown in the United States, more than 50 million people are in lockdown in the Philippines and 1.3 billion people are in lockdown in India.³

Impact of Corona Virus: Footings: Across-the-Board

The situations of each countries lockdown impact is depends upon severity of illness, mortality rates, morbidity rates, mild to critical cases, economy of the each topography, population etc.

- India, China, France, Italy, New Zealand, Poland & UK have done the world's largest & most restrictive mass quarantines.
- Wulhan, China, where the first came, has been locked down for more than 6 weeks.
- Russia closed its borders & cancelled all type of flights
- Colombia started a nationwide quarantine, with people over the age of 70 told to stay indoors until May 2020
- India moved into full lockdown for 21 days on March 24th 2020 included the Passengers buses, Rickshaws, rail & flights
- The UK moved into full lockdown on March 23rd 2020
- Australia closed non essential business on March 23rd 2020 & further closure also were declared
- China applied the largest quarantine in human history to try to contain the Corona Virus, Locking down the around the sixteen divisions at the end of January 2020
- Jordan has been under a strict in definitive lockdown since March 21st 2020, People caught leaving their homes are subjected to Jail for a year
- Argentina moved into a preventative & compulsory lockdown on March 21st 2020
- Israel moved into partial lockdown-foreigners were already banned from entering the country on March 12th 2020
- Belgium moved on lockdown on March 17th 2020 & it was extended to April 19th 2020
- The European Union banned non-essential travel into the region for at least 30 days
- Germany declared a shutdown of shops, churches, sports facilities, bars & clubs in its 16 provinces
- The Malaysian government declared on March 16th 2020 that all business operations will be closed except essentials like markets, utilities, broadcasting, banking & healthcare & also its extended into weeks
- France closed nonessential businesses on March 16th 2020
- Morocco suspended international flights on March 15th 2020 & Has closed, mosques, schools & restaurants
- The Czech Republic closed most shops & restaurants for ten days & banned foreign travel starting from March 16th 2020
- Kenya closed schools & blocked non residents from entering the country, and has closed pubs & restaurants on March 15th 2020
- Spain became the 2nd European country to impose a nationwide quarantine on March 14th 2020, the lockdown was extended to April 12th 2020
- Poland declared it would shutter businesses & prohibit International travel from March 13th 2020
- Kuwait moved into a two week nation-wide lockdown on March 13th 2020
- Ireland moved into two-week lockdown
- Norway moved into two-week lockdown on March 12th 2020 & the government planned to lockdown through Easter
- El Salvador's president declared an Alerta Naranja-An

orange alert-March 11th 2020

- Denmark enacted a lockdown on March 11th 2020, which it has now extended to April 13th 2020
- In Italy, a nationwide lockdown moved into effect on March 10th 2020 that restricts virtually all aspects of life for its 60 million citizens, including retail, leisure, worship, imprisonment & travel
- Many other countries have also closed their borders & went into lockdown (Canada, Lithuania, Maldives, North Korea, Peru, Qatar, Slovakia, Ukraine & Croatia)
- Today, as countries took precautions to contain the spread of the corona virus or COVID-19, many implemented lockdown are unlocked now.⁴

Effects on Global health: A Meta-Analyzed Record

Mental Health Challenges

Psychological disturbances at the individual, family, interpersonal and cultural level (e.g., activity restriction and reduction of pleasant events; personality traits; hypochondria and cyberchondria; mental disorders; family characteristics; social support, etc.). The effect of mass media and social media leads fear and anxiety & maladaptive behaviors towards the COVID-19 emergency. Many of the people were traumatized to death of loved ones and their own family. The quarantine homes, social distancing & lockdown leads a huge spike of mental and physical deviations.⁴

Threat to Physical Health

People have troublesome experiences to the stages of COVID-19 like high grade fever, cough, severe acute respiratory syndrome and even death. A known case of existing flue lead the COVID-19 confirmed patients face the potential complications of illness. Recovery from the case depends on the personal attributes of the patient, quality of health care settings, quality of care delivered, early identification & its management. Many countries found very less number of recovered cases compared to the number of deaths & critical cases.⁵

Elderly People: Battling Diseases

The patients who were above the ages of 51 years need to fight with COVID-19. A marked decline of recovery can be seen the cases across the country. The mortality rates of pandemic Covid-19 is found to be high among the aged peoples. Many of the countries keep the elderly case in second priority to implement the treatment protocol of COVID-19. It is due to the lack of expected outcome towards the elderly cases and also to utilize maximum the health care resources & health care providers to the most needed patients who have early recovery and good prognosis.⁵

Co-morbidity & Covid-19: A Correlated Health

Deviation

Among laboratory-confirmed cases of Covid-19, patients with any co morbidity yielded poorer clinical outcomes than those without. A greater number of co morbidities also correlated with poorer clinical outcomes. A thorough assessment of co morbidities may help establish risk stratification of patients with COVID-19 upon hospital admission. The co morbidities are Hypertension, Diabetes Mellitus, chronic respiratory diseases and cancer.⁵

Health Care Providers: Health, Concerns, Future & their Agony

The healthcare professionals especially Nurses & Doctors, across the globe working tirelessly to treat COVID-19 patients, often putting their own lives at risk. Most of the underdeveloped & developing countries of the healthcare professionals not have enough facilities for personal protective equipments. Due to high mortality rates; even the developed countries also not have sufficient personal protective equipments. Many of the health care settings not have enough number of life-saving support system for critical patients. The healthcare professionals were mentally demanded to utilize the existing minimum health care resources. The health care providers also mentally and physically devastated due to the pandemic effect of Covid-19. Currently the all healthcare professionals in every country were under 14 days of quarantine after 7 days of their work to break COVID-19 chain. Amidst the gravity of this pandemic illness, health care providers while adhering to their profession, are forced to keep aside their own personal share of concerns regarding their own health & also their families health.⁶

Today's Latitude & Forthcoming Impacts: Future of Pandemic COVID-19

- Decline in global supply chains, wages and productivity.
- Fragile Economy, State Democracy (Centralized response), Barbarism (Decentralized response), State Communism (Centralized response) & Mutual aid (Decentralized response).
- Though all institutions have reopened but classes till 8th standard are suspended till 31st March 2021 as per latest government protocol.⁶

Conclusion

Behind these statistics of demography and anthropological diversity lie the human costs of the pandemic, from the deaths of closed ones and family to the physical impact of infection and the mental shock and fear faced by almost everyone. Not knowing how this pandemic will play out affects our economic, physical and mental well-being against a backdrop of a world that, for many, is increasingly anxious, unhappy and lonely. Many researcher and scientist are working tirelessly to develop a clinically developed vaccine

and now India has also pulled up its socks after seeing Pfizer and Modern making its way into the market. The clinical trial phase I and II are successfully completed, now phase III trials have began all over the country. The vaccine will be available for healthcare workers and elderly people while the children will have to wait a little longer till the safety data is out.

Conflict of Interest: None

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