Faculty of Medical and Health Sciences, University of Poonch Rawalakot
Journal of Pharma and Biomedics
ISSN: 3007-1984(online), 3007-1976 (Print)
https://www.jpbsci.com/index.php/jpbs

Planet earth and covid pandemic: A review

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Received: February 11, 2024; Revised: March 17, 2024; Accepted: March 30, 2024

A B S T R A C T

One of the largest problems the world is now experiencing is environmental change. Progress has been slow despite years of efforts to repair the natural environment. The covid-19 pandemic's effects have, however, recently had a notable beneficial influence on the ecosystem, which should have a favorable impact on the rate of global climate change. The epidemic has irrefutably and profoundly altered both human behavior and the local natural system. The covid-19 pandemic has had both beneficial and detrimental consequences on the environment. The virus, which was initially discovered in China, traveled fast to the rest of the world and resulted in several lockdowns. People were forced to stay at home since public transit, schools, universities, and places of employment were closed. Cities quieted down and pollution levels dropped as a consequence, saving many lives throughout the globe. Tiny adjustment a series of fascinating beneficial consequences on Earth can start a chain reaction. This is especially true in the case of the covid-19 epidemic, which has significantly affected society and the environment.

Keywords: Corona virus; Environment; Family; Education; Economy

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INTRODUCTION

Numerous coronaviruses have been linked to respiratory illnesses in humans, including everything from the common cold to more serious conditions like Severe Acute Respiratory Syndrome and Middle East Respiratory Syndrome. The World Health Organization designated covid-19 as the name of a novel infectious respiratory illness that first appeared in Wuhan, Hubei province, China, in December 2019. It is brought on by SARS-CoV-2, a coronavirus of a recently identified class (severe acute respiratory syndrome coronavirus 2). It is an RNA virus with only one strand. The SARS-CoV-2 virus particles have a crown-like look due to their spherical form and the mushroom-shaped proteins termed spikes that protrude from their surface. The spikes attach to human cells and let the virus enter. The new coronavirus's spike protein and bat coronaviruses' spike proteins have a 98% sequence similarity. The entrance site into human cells, angiotensin converting enzyme 2, was discovered by the researchers to attach to the spike protein of SARS-CoV-2. Compared to SARS, it has a 10–20-fold greater binding affinity. Greater human-to-human transmission is a result of the higher binding affinity (Ankita & Sangeeta, 2020). Regardless of how much the virus has affected the citizens of various countries; it has had a significant influence on both the global and national economy. The new coronavirus spreads without regard to caste or creed, borders, or religion. It has a high risk of spreading and is quite unpredictable. This type of pandemic, for which we are racing to create a vaccine to stop its spread, was never anticipated by the world (Kumari

& Shukla, 2020).

The new covid-19 appeared to be very infectious and spread swiftly over the world. As of April 4, 2020, this corona virus pandemic had caused at least 52,879 fatalities and over 10, 101, 66 confirmed cases. On May 19, 2020, there were 3, 16,005 fatalities and 46, 89,511 confirmed cases. These figures are shifting quickly. Phase-1 (foreign cases), phase-2 (local transportation), phase-3 (community transportation), and phase-4 are the four phases of the new corona virus's transportation (transmission out of control). When referring to the spread of illness among people, the phrase "transportation" refers to the movement of microbes from one sick person to another who is not diseased, either directly through touch, indirectly through contact such as surface contamination, or by droplets. On the World Health Organization website, at https://www.who.int/emergencies/diseases/novel-coronavirus-2019, you may find full, current information regarding covid-19.

The maturation time for covid-19, which lasts an average of 5 days but can extent from 1 to 14 days, is discussed in the following paragraphs. The report indicates that although fever, exhaustion, and a dry cough are the most typical symptoms of the virus, some patients may also feel aches and fatigue, stuffy nose, rhinorrhea, pharyngitis, or loose motion. It is also mentioned that some persons may get an infection yet not show any signs of illness. The article also emphasizes how those who are older and those who have underlying medical disorders like high blood pressure, heart issues, or diabetes are more likely to develop serious illness.

An intermediate host is involved in the zoonotic illness covid-19. It is still unclear exactly where the genesis and transmission to humans came from. According to studies, pangolins or snakes might be the intermediate hosts for SARS-CoV-2, the virus that produces covid-19, with bats acting as the reservoir host for all three. Numerous viruses, including over 200 coronaviruses, are known to be carried by bats without making them ill. As a result, it is thought that bats serve as the main source of transmission before moving on to intermediate hosts and finally humans. Transmission might be place directly or indirectly. When an infected person coughs, sneezes, or speaks, respiratory droplets are created that can be inhaled by nearby healthy people and cause direct transmission. Contact with infected surfaces, such as doorbells, elevator buttons, stair railings, veggies, fruits, etc. that are often touched by healthy persons, might result in indirect transmission. Additionally, fecal-oral transmission is another way that the virus can spread. (Kumari & Shukla, 2020). According to research, the virus penetrates the respiratory mucosa (Singhal, 2020) via the lower respiratory tract's angiotensin receptor 2 (ACE2), which is similarly used by SARS-CoV. (Zhou *et al*., 2020).

The World Health Organization has issued guidelines on modifying social and public health policies for the covid-19 response's second phase. Some countries have suggested utilizing the discovery of covid-19, SARS-CoV-2; antibodies as the foundation for a "immunity passport" or "risk-free certificate" that would permit people to travel or return to work on the presumption that they are immune from reinfection. However, there is yet no proof that those who have antibodies and have recovered from covid-19 are guarded against contracting a second infection. The information about the antibody reactions to SARS-CoV-2 infection is regularly analyzed by WHO. Studies have indicated that people who have recovered from illness have antiviral antibodies, but some of them have extremely low levels of antiviral neutralizing antibodies in their blood, indicating that cellular immunity may also be crucial for recovery. There is not enough information regarding antibody-mediated immunity at this point in the pandemic to ensure the validity of an immunity passport or risk-free certificate. The danger of ongoing transmission might grow with the usage of such certificates. There are currently no antiviral medications or vaccinations that are therapeutically effective against covid-19. The virus has swiftly spread over the whole human population, posing severe health, economic, environmental, and social problems. (Chakraborty & Maity, 2020) The corona virus epidemic is badly affecting the world economy, and nations are working to stop the spread of the disease by testing and treating patients, putting suspects in isolation, limiting big gatherings, and putting their populations under full or partial lockdowns. In this review, the effects of covid-19 on the environment, society, and economy are discussed, along with potential controls for the illness.

DISCUSSION

COVID-19 and climate change

Since the dawn of civilization, people have manipulated nature for personal gain. Industrialization and urbanization are now required to satisfy the demands of a growing population, but they have also had considerable detrimental effects on the climate. Through a variety of anthropogenic activities, humans have been harming the environment without taking into account continuous development. (Verma, 2017) Environmental contamination has thus grown to be a significant problem. It is obvious that

environmental pollution may alter the prevalence and distribution of a number of infectious diseases carried by vectors, including bacterial and viral illnesses. However, many towns and cities in the impacted nations have been on partial or complete lockdown for a protracted length of time because to the unique COVID-19 epidemic. To prevent communal transmission, local and national governments have shut down educational institutions and limited citizen movement. Mass gatherings for religion, culture, society, science, sport, and politics, like the Hajj and the Olympics, have been postponed. All forms of transportation, including those by airline, rail, bus, and private car, have been limited or canceled, and businesses have closed.

The ecosystem has benefited greatly from these initiatives to stop the spread of SARS-CoV-2. Industry closures have drastically reduced industrial waste emissions. The amount of greenhouse gases and small suspended particles being emitted has decreased as a result of fewer automobiles on the road. Air quality has improved as a result of less activity at factories, industrial sites, and building sites. As a result, aviation emissions have drastically decreased. According to the Environmental and Energy Study Institute, aviation emissions made up 2.4% of the world's CO2 emissions in 2018 (Chakraborty & Maity, 2020).

Air quality has dramatically improved due to a major decrease in vehicle traffic. Numerous sources have shown how stringent coronavirus lockdowns have resulted in a significant improvement in the air quality indices in the world's major cities. Eco Watch's finding that the new coronavirus epidemic has led to less air pollution is supported by NASA satellite data, which also indicate large drops in air pollution. According to The Guardian, "China, the world's largest carbon emitter, saw a reduction in emissions of roughly 18% between early February and mid-March, or 250 million tons, or more than half the UK's annual production. A decrease of around 390 million tons is anticipated in Europe. In the US, where passenger car traffic—the main producer of CO2— has decreased by roughly 40%, significant drops are also anticipated.

When compared to previous year's figures, China's emissions of NOx, CO2, and different hydrocarbons have significantly decreased during the corona virus lockdown 2020. 2019 The NO2 levels in Eastern and Central China were significantly lowers (10–30%). (Kulshrestha, 2020) Similar to (Fu *et al*., 2020), the lockout has significantly reduced air pollution in large American cities. The lockout has proven a very environmentally friendly method of reducing noise and the injection of pollutants into the stratosphere and troposphere.

Coronavirus outbreak 2020 is anticipated to see the biggest yearly decline in CO2 emissions, more than during any other economic downturn or time of war. Experts warn that it could not be enough to prevent global warming from exceeding the 1.5°C target set forth in the Paris Agreement. The usage of fossil fuels or traditional energy sources has been significantly reduced as a result of decreased demand for electricity in industry. Ecosystems are recovering significantly. For the first time in their lives, residents of many large cities are seeing a clean sky and pure river water. The Covid-19 shutdown has caused a diversity of birds to be visible in some areas. The amount of pollution in popular tourist locations including woods, seashores, hill regions, etc. is also significantly declining. Perhaps the ozone layer is also recovering. The pandemic has had conflicting effects on human civilization in that it has both caused widespread damage and greatly improved the state of the environment across the planet. The lockout serves as a curative for issues like brown haze, ozone depletion, human health, and climate change.

Diversity and COVID-19

Three sorts of variety are necessary for an ecosystem: biological, genetic, and functional. The capacity of a species to adapt to changing conditions is referred to as genetic diversity, while the biophysical processes that take place in the region are referred to as functional diversity. Biological diversity refers to the variety of species in a certain area. Biodiversity is protected via genetic variety (Verma, 2017). For the sake of the earth as a whole, it is crucial for people to comprehend the levels and values of biodiversity (Verma, 2016).

The term "biodiversity," sometimes known as “biological diversity,” describes a vast range of plant and animal species that occur in their natural habitats, as well as the diversity of plant and animal life in a given ecosystem. Genetic diversity, species diversity, and ecological diversity are the three levels at which biodiversity is typically characterized. For extensive biodiversity, an ecological equilibrium is required. (Verma, 2017) Anthropogenic pursuit and unsuitable agriculture disrupt the natural equilibrium and have several harmful repercussions. (Verma, 2017) For humans to survive, the ecological balance must be maintained. (Verma, 2018) It is nearly difficult to achieve equitable and sustainable development without biodiversity preservation and a reduction in human activity. (Verma, 2017) Environmental ethics are intimately tied to sustainable development and may need to be rethought and redefined in the context of today. (Verma, 2017) Biodiversity is significantly impacted by climate

change as well (Prakash & Srivastava, 2019).

Nature encourages and fosters coexistence and variety among all creatures by creating conditions that are suited for everyone. As highly evolved evolutionary products, humans have always tried to influence society and the environment to foster a favorable environment. We now face unheard-of hazards like covid-19 and global warming because of overuse of natural resources, a rise in anthropogenic activity, and a human-centric attitude to the environment. These international dangers are causing academics, decision-makers, and other stakeholders to reevaluate their goals and course of action.

Due to the use of information and communication technology, the globe is now a "global community," and because we depend on nature for our needs, we also have a duty to protect it. To use natural resources in a way that promotes equitable and sustainable growth while living with other species on the planet, we must build an environment-centric strategy. The shutdown gave us the chance to change our philosophy from one that is human-centric to one that is eco-centric.

The human-centric worldview prioritizes humans, accords them the greatest position, and believes they are the most qualified to run the earth. It underlines that the earth's resources are limitless for people alone and that a sound economy is necessary for a sound environment. Contrarily, the eccentric worldview holds that the planet's resources are finite and belong to all living things. Humans have the right to take resources from the environment, but not to the point where doing so damages other species and destroys the ecosystem. This eco-centric worldview promotes living sustainably and on the planet as a part of it, just like any other member of nature. It is founded on earth knowledge. It acknowledges that a healthy environment is necessary for a thriving economy.

Many birds, especially vultures, have started to arrive as a result of the lockdown. On crops and other plants, insect pollinators have proliferated, pointing to an ecological balance and biodiversity. Anthropogenic activities, particularly overuse of natural resources, have been reduced as a result of the lockdown. Since most people are confined to their houses, several sorts of pollution are automatically avoided. The immediate atmosphere exudes cleanliness and greenness. Due to decreased residential and industrial effluent deposition, the water in rivers like the Rapti, Saryu, Ganga, and Yamuna in cities has also become clean and translucent. Fish and other aquatic life benefit from the decline in pollution levels.

Society and COVID-19

All facets of society have been significantly impacted by the COVID-19 epidemic, especially those who are already at risk, such those who are poor. For instance, homeless people could not have access to secure housing, which makes them more prone to catching the virus. Visit the WHO website frequently to remain up to date on the newest viral developments (Prakash & Srivastava, 2019).

Governments have urged youth to actively participate in safeguarding both themselves and the larger community by raising awareness and assisting those who are most at danger. This is essential for preventing the virus's spread and the effects it has on society, the economy, and public health.

Social distancing is a behavior that has altered how individuals connect with one another and distanced friends and family members. But because to technology, individuals may remain in touch even when they are geographically apart. People are creating new habits as they get used to remaining at home in order to fulfill their household and professional obligations.

Due to the realization that people's essential requirements are low and that they were previously wasting resources to preserve societal status, resource consumption has decreased as a result of the lockdown. The lockdown has enabled the natural ecosystem to recover from human effects and provides an invaluable chance to learn about sustainable development approaches.

Families and COVID-19

The COVID-19 epidemic has significantly impacted family life because many people are now compelled to work from home. Families are now spending more time together, conversing, dining, and playing, which has strengthened their bonds. Due to employment and other commitments, this wasn't always an option for many families. Due to their hectic work schedules; some parents were only able to visit their kids once every week or twice every two weeks. However, the lockdown has given families a chance to connect and spend more time together.

Additionally, the flexibility of working from home has improved people's productivity and health. Being at home all the time promotes deeper sleep, which is essential for a healthy lifestyle and increased productivity. Additionally, it reduces the strain and time spent traveling to and from work, which increases effectiveness and production. Additionally, by lowering fuel usage, it aids in the control of air pollution. It's crucial to remember, meanwhile, that the lockdown has also contributed to an increase in intimate partner and domestic violence. Aggression has grown at home as a result of financial insecurity, stress, and

uncertainty, and abusers now have more influence over their victims' everyday life.

Education and the COVID-19

Worldwide school, university, and other learning institution closures as a result of the covid-19 epidemic have had a profound influence on educational systems. Approximately 1.278 billion pupils had been impacted by school closures as of May 10th, 2020, due to the epidemic. Closures have been enforced in 176 countries, impacting around 74.5% of the global student population, according to UNICEF monitoring. The closures have significant economic and sociological repercussions in addition to having an impact on families, instructors, and students. Children from disadvantaged backgrounds and their families have been severely affected, experiencing disruptions in their education, poor nutrition, and childcare issues.

The lockdowns have severely disrupted the usual academic session, with elementary and secondary children suffering the most because they are unable to connect academically with their professors. Despite attempts by teachers, school administrators, and governments to use e-learning and distant learning programs, the disruption in education may have medium- and long-term effects on the quality of education. To reach students remotely and lessen the impact of closures, UNESCO has advised the adoption of distance learning programs and open educational software.

Universities have further adapted by requesting that their faculty members give lectures online and deliver reading materials electronically. For senior pupils, e-classroom instruction has largely taken the role of traditional classroom instruction. Institutions and people have welcomed this worldwide movement toward e-education and remote work environments. However, as students may not be able to obtain hands-on experience in laboratory work, e-education may have an influence on research and its methods. As a result, there could be fewer top research institutions, and funding priorities and patterns for upcoming research topics might alter.

Employment and COVID-19

Globally, especially in Pakistan, the covid-19 epidemic is having a severe detrimental impact on employment and incomes. According to a forecast by the International Labor Organization, by the second quarter of 2020, the crisis will have cost the world 6.8% of its working hours, or 196 million full-time jobs. The loss is anticipated to be 7.3%, or 126 million full-time employees, throughout Asia and the Pacific. Globally, the ILO predicts that 13 million people will lose their jobs.

The epidemic is severely affecting the job market, stopping income, and forcing some businesses to fire staff in order to avoid paying them during the crisis. This is particularly tough for recent graduates who have trouble obtaining work. 3.4 billion People in the world's workforce, or more than 82% of them, are now impacted by complete or partial workplace closures. Due to this, there are now fewer full-time positions available, and wages have decreased. The epidemic has furthermore compelled many individuals to take time out of work to care for themselves or their family. Temporary plant closures have had a particularly negative impact on the manufacturing industry.

The COVID 19 and illegal activity

Criminal activity in Pakistan has been significantly impacted by the covid-19 outbreak. Numerous criminal acts, including bomb explosions, kidnappings, rape, robberies, and others, have decreased as a result of the lockdown and the avoidance of public gatherings. Due to isolation, crime has generally decreased and there have been fewer arrests.

Criminals are now more likely to take care of themselves and refrain from committing crimes in public locations as a result of the epidemic, which is good for society. Due of the lockdown, social isolation, and travel limitations, it may be claimed that the pandemic has had an effect on all forms of crime, especially organized crimes like cybercrime and street crime. Due to travel limitations, the lockdown has also decreased the number of traffic accidents.

Global Supply Chain and Economy and COVID-19

The supply chain is a network of businesses or activities that collaborate to plan, manufacture, and deliver a good or service to a customer, from the procurement of raw materials through the distribution of the final item. It is essential to the automotive and IT industries, but because of the COVID-19 epidemic, these industries had to shut down, which had an impact on the worldwide supply chain. Daily reports are being released on how the epidemic is interfering with global industrial activities. Numerous businesses have already closed or slowed down production and assembly lines in the US, Europe, and India as a result of the epidemic (Omkar, 2020).

Both the economy and public health have been significantly impacted by the covid-19 outbreak. Governments must act quickly to limit the pandemic's negative consequences since they are likely to cause the economy to lag for several years (Raut, 2020). Given that the situation is likely to have a negative effect on enterprises and the economy as a whole, this involves both short-term and long-term plans to solve it.

CONCLUSION

In conclusion, the covid-19 pandemic has demonstrated that

even if people may have highly developed technology and destructive weaponry, nature still possesses the ability to negatively affect human lives through a little virus like covid-19. The best approach to protect oneself and others from the virus is to regularly wash one's hands or sterilize them with alcohol, refrain from touching one's face, and adhere to social distancing rules. When leaving the house for important tasks, wearing a mask is advantageous. It's crucial to remain at home and carry out any job from there during lockdowns.

By enhancing immunity, enhancing focus, and boosting confidence, yoga is a fantastic approach to maintain excellent health. Immunity and healthy personal growth depend on spiritual development as well. Making the most of shutdown time may be accomplished by enrolling in professional online yoga programs. Future worries are unnecessary since time has a way of making everything right again and this experience has taught us some valuable lessons.

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