

COVID-19 AS A BOON OR BANE FOR ENVIRONMENT: A SOCIO-LEGAL STUDY

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Abstract

Even after 2 years of a pandemic, the entire world is struggling to cope with the negative impact of COVID -19 on human life and the world economy. Within these 2 years, many human lives were affected. Even there is no actual accurate data to show how many people lost their lives due to COVID-19. Before COVID-19 one of the major concerns of the entire world was environmental pollution. When the COVID-19 hit the world the concern of every country was how to control the situation and mortality rate due to COVID as it can be deadly in those countries where air pollution is already high. Dr. Bernstein, in the study conducted by Harvard, stated that "In places where air pollution is a chronic problem, we have to pay particular attention to individuals who may be more exposed or vulnerable than others to polluted air, such as the homeless and those with chronic medical problems. These individuals may need more support than they did even before coronavirus came along." COVID-19 was not only the issue that was a concern for everyone but another issue related to it was how to improve the air quality. In several studies, it was proved that it can be more deadly for the polluted countries where the people are already suffering from various airborne diseases as they will be more prone to COVID -19. That was the concern and situation for all countries to stop spreading these deadly diseases and to improve the air quality also for further spreading of COVID-19.

The researcher through this research will discuss the actual reasons for the spreading of the COVID-19 and also about the reasons behind the high mortality rate with the help of the scientific data and also about the truth of its preexistence (coronavirus) before 2019. Also, researcher will discuss the positive as well as the negative impact of COVID-19 on the environment.

Keywords: Covid-19, pandemic, environment pollution, population, air pollution

JEL Classification: [K32]

1. Introduction

Now in mid-2022, Covid-19 has become a part of our life. In 2019 when for the first time it was reported no one ever imagined the situation and loss it was going to cause to human life. It was in December 2019 when for the first time the disease caused by the novel coronavirus was reported in Wuhan city of China. Subsequently, the virus was named SARS-CoV-2. This for the fifth time the world has witnessed the pandemic after the 1918 Spanish flu (Liu, Kuo, and Shih, 2020).

Covid-19 patients were having influenza-like symptoms like fever along with respiratory symptoms, headache, and in severe cases, they required

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hospitalization due to a fall in oxygen level. As it was a contagious disease so there was a need of maintaining social distance from spreading it further. As somewhere this disease was related to respiratory tract mostly affecting the lungs, it was found in one of the research that countries, where the air was highly polluted their social distancing, should be strictly followed to prevent more casualties related to covid. Most of the death cases were reported from countries where air pollution was high (Coronavirus and Air Pollution, n.d.).

Air pollution has a direct role in the spreading of the Corona and may be one of the reasons behind the highest mortality due to covid was air pollution.

2. Relation between air pollution and covid-19 mortality

According to Dr. Maria Neira, WHO Director of Public Health and Environment “Air pollution is one of the biggest public health issues we are confronting today” (Wood, 2022). Every year 7 million premature deaths are caused due to air pollution all over the world. Breathing polluted and toxic air cause damage to the immune system and thus increases the risk of chronic health conditions. Long-term inhalation of particulate matter into the lungs can lead to respiratory diseases such as pneumonia, asthma, lung cancer, etc. During covid also much research has been done which shows that places with high air pollution have high mortality due to covid.

Italy was one of the worst countries affected by Covid-19. Giovanni Veronesi from the Research Centre in Epidemiology and Preventive Medicine of the University of Insubria, Varese in his research found “the first solid empirical evidence for the hypothesized pathway linking long-term exposure to air pollution with the incidence of COVID-19, and deserves future generalization in different contexts (Varshney, 2022).”

Manas P Roy, an expert from the Union Ministry of Health and Family Welfare of India studied the data on air quality parameters (SO₂, NO₂, PM_{2.5}, and PM₁₀) and COVID-19 in 30 states, where he found that places were badly affected by COVID-19 where the air pollution was high (Roy, 2021). Even long-term exposure to air pollution also has a risk of admission of the covid-19 patients to intensive care unit and even death.

Even according to Alison Lee, “The COVID-19 pandemic has brought to the forefront the critical role of the environment on health disparities. These data suggest that long-term exposure to air pollution, even at concentrations below US Environmental Protection Agency regulatory standards, is associated with higher COVID-19 morbidity and mortality among hospitalized patients. (Lee, 2021)”

The Harvard Chan study led by Xiao Wu and others in one of their research found a relationship between air pollution and COVID-19 mortality. This study was done by analyzing the data of 120 cities in China where the researchers found that there is a strong relationship between air pollution and COVID-19 infection. Of the death reported in 66 regions of the world, it was found that 78% of the

death was reported from the five most polluted regions i.e., Italy, Spain France, and Germany (Coronavirus and Air Pollution, n.d.).

Another research conducted in Sweden also shows the relationship between air pollution and COVID-19 mortality (Yu et al., 2022).

This pandemic was not the first one in the world, where data shows that air pollution has a direct link with the mortality rate related to COVID-19. Hundred years back in 1918 the entire world witnessed one of the worst disasters of history i.e. Spanish Flu. As per the data, it all started with Albert Gitchel (Martini, Gazzaniga, Bragazzi, and Barberis, 2019) who was a cook at Camp Fuston in Kansas, where on March 4th, 1918 he complained of cough, fever, and headache. It was the first reported case of Spanish Flu and soon after him within three weeks 1100 soldiers were hospitalized with thousands of more soldiers affected. Spanish flu spread from Europe and by July 1918 it was spread to North Africa, China, India, Australia, and the US by October 1918. During Spanish Flu more than 50 million people were killed and more than 500 million people were infected worldwide. In several studies which were conducted during the Spanish flu to find out the reasons behind the high mortality, it was found that air pollution was the cause behind it. At that time coal was the main source which was used for electricity generation. The tremendous use of coal for electricity generation has caused air pollution and thus it acts as a fuel for spreading influenza and high death rate also (Clay, Lewis, and Severnini, 2018). Cities, where coal was used more for electricity generation, have more reported death cases in comparison to cities where the consumption of coal was medium.

In 2003, SARS (Severe acute respiratory syndrome) was reported first in China and then spread to other countries. Even during this time, more than 8000 cases with 10 percent mortality were reported worldwide. One of the Chinese studies on SARS-CoV-1 showed that people living in the most polluted areas had a two-fold increased risk of dying from SARS compared to people living in less polluted areas (Cui et al., 2003).

Thus, from the above discussion, it was clear that there is a direct relationship between mortality due to COVID-19 with air pollution. This is not the first time it was highlighted but in 1918 Spanish flu and 2003 SARS also pointed out earlier that respiratory diseases will get worsen with air pollution. Air Pollution was a major issue behind the high death rate during COVID-19, SARS, and Spanish Flu, and all these diseases are related to respiratory organs. Thus, if someone's lungs are already affected by air pollution in that situation this virus will cause more impact on the body in comparison to those whose lungs are not affected. Maybe this might be the reason that children were less affected during this pandemic in compare to ages one. As aged persons were exposed to more air pollution in comparison to younger ones.

Air pollution and its effects on human health are known to everyone. But somewhere even after knowing the main causes of all these issues we have

failed to prevent the pandemic. Air pollution was the main cause of the highest mortality in the covid-19 which we failed to control for the last 100 years when Spanish flu hit the world. We discussed these issues at the international level every time but failed to tackle them though it is increasing day by day. But during the pandemic COVID-19 has shown the way to control the pollution.

Behind every problem, there is a solution. COVID-19 was the biggest issue in 2019 to till date. But this problem has shown us the remedy for future prevention of such kind of pandemic. Though COVID-19 will be considered to be a disaster for human beings, it has shown its positive and negative impacts on the environment too.

3. Coronavirus conspiracy: about its existence

One of the important questions relating to Covid-19 was whether it's a new virus affecting human beings for the first time in the world? This question is even important for this research also. As may be most of us are not aware of the fact that coronavirus is not a new virus.

The first human coronavirus was identified by Scientists in 1965 and the symptoms were a common cold. After that, researchers found a similar virus in humans and animals and name them after their crown-like appearance (Bhargava, 2021). Seven kinds of coronavirus can infect human beings. SARS which was spread in 2002 from China to other parts of the world and MERS (Middle East Respiratory Syndrome) which was spread in 2012 in Saudi Arabia are from the coronavirus family. The virus of 2002 changed its variant and becomes more deadly when its effect in Saudi Arabia in 2012 (Bhargava, 2021).

As per previous research done on SARS, it was a global threat that was even recognized by the WHO because of its contagious nature. During this time when SARS was spreading rapidly, The Global Outbreak Alert and Response Network was activated to help identify and deploy volunteers from around the world to assist the most severely affected nations. Even WHO has issued various recommendations to help nations to control outbreaks and prevent the further spread of SARS (LeDuc and Barry, 2004).

Many documents which are available in the form of research show that coronavirus existed for a long back and COVID-19 is also a new variant of coronavirus which is more contagious in comparison to 2002 and 2012. According to a blog published by Narayana Health "While Covid 19 pandemic sweeps across the globe, it is important to understand the transmission and the effect of the virus which has made it a pandemic. Covid 19 belongs to the coronavirus family, which also includes the SARS virus (severe acute respiratory syndrome) and MERS (Middle East Respiratory Symptoms) virus. The family of Coronavirus includes virus strains that cause the common cold and flu (Health, 2020)". In another research it was stated that "SARS-CoV-2 belongs to the same *Beta-coronavirus* genus as the coronaviruses responsible for the severe

acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS) (SARS-CoV and MERS-CoV, respectively), this novel virus seems to be associated with milder infections. Moreover, SARS and MERS were associated mainly with nosocomial spread, whereas SARS-CoV-2 is much more widely transmitted in the community (Petrosillo et al., 2020)’’.

Now the conspiracy that the researcher wanted to highlight here is that as I have already discussed above the relationship between air pollution with COVID-19 mortality, now the question which arises here is that when WHO was already aware of the presence of the Coronavirus and also about its impact in human being in past then why guidelines and precautionary measures were not issued to prevent this virus in future. During COVID-19 it was said by WHO that ‘‘Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age’’. But as per the research done by Harvard Chan study (Coronavirus and Air Pollution, n.d.), it’s the air pollution that has caused the disease more deadly, and also because of the pollution only it has spread fast. Another thing discussed during COVID-19 was to increase the immunity of the body so that it can resist the virus. Now the person whose lungs are already affected due to air pollution even if they eat healthy food for their immunity growth then also it will not help them to fight against the diseases if they breathe the polluted air for a long time. Immunity should be good in the human body to resist any kind of illness but if the environment in which you are living is highly polluted then it won’t help you. That is the reason COVID-19 has affected all groups of people irrespective of their ages and status. The whole world was aware of the situation of the air pollution but then also after the Spanish Flu Influenza Pandemic, no strict measures or action has been taken to control the air pollution for the future generation. Sustainable development also speaks about the preservation of the environment for the upcoming generation by controlling pollution and this is not a task of particular countries or WHO but it’s the duty of every person.

From the above discussion, the researcher would like to say that Air pollution was the main reason behind this pandemic. COVID-19 was a man-made virus or it was natural that is not cleared. But from the documents available it can be said that the pandemic situation was created by us. Each of us is responsible for the loss suffered by everyone during this pandemic. Air pollution has increased from our activity in the last 100 years and the environment is taking its revenge in the form of pandemics, natural calamities, etc. If we failed to control our activity now then in the future, we can expect such kind of pandemic more. If we want a safe environment for our future generation then we have to control our activities.

Every country has various laws relating to air pollution, and environmental pollution but then also Government has failed to tackle the pollution issues. We talked about Sustainable development, Precautionary Principle, and the Polluter pays principle but all these laws will not help us until every person in this world understands the importance of these concepts/laws for environmental protection.

4. Positive and negative impacts of covid-19 on the environment

We are well aware of the loss which we have faced during COVID-19. But during this pandemic, many positive changes have been seen in the environment which shows that if we stop our interference by controlling our activities then the environment can heal itself. Till now there is a possibility of making our environment clean and clear. That can be found from the following examples which were worldwide reported by various media houses during the pandemic.

4.1. Positive impact on the environment

When the lockdown was imposed in all most every part of the world to control the spreading of COVID-19, one positive point which was seen during this time was the improvement of the air quality. During the lockdown, all kind of industries, and transportation was stopped completely for a longer duration. All kinds of human activities were stopped to spread the contagious diseases. Remarkably the Air quality of every country was improved. The ozone layer started to heal because of the lockdown (Rasmussen, 2021). Human activity created ozone depletion but nature heal it himself through the pandemic. That is something a tight slap for us that being human we have done injustice to our mother nature in every aspect, and nature has taught us the consequence of it through pandemic but on the same side, during this pandemic nature has started to heal itself by sending a message to us that its time to take precautions or it will be too late. If every person in the world understands the importance of precautionary principles in terms of environmental protection, then maybe environmental pollution can be controlled.

In November 2019 the Delhi Government has declared a state emergency due to poor quality of air. But it was during a nationwide lockdown that 60% of air quality was improved within the initial days of lockdown (Hoeller, n.d.). As per media reports, New Delhi has experienced “the longest spell of clean air on record back in April (Hoeller, n.d.)”. The water of the river Yamuna gets cleared due to the lockdown for the first time after a long time.

Even in China also the air pollution was remarkably reduced by February 2020. The same can be seen in the US. Italy was one of the worst affected countries affected by COVID-19 and also the air pollution was high there. Milan is a highly air polluted city in Italy. But once the traffic was controlled during the lockdown the air quality was also improved. Now according to a media report,

Milan is thinking about introducing a plan to reduce car use after the pandemic to avoid a rebound.

As the air pollution dropped in India, the Dhauladhar mountain range was visible to the residents of Jalandhar city in Punjab for decades. On the other hand, people in Srinagar, Kashmir, could see the Pir Panjal Mountains more clearly. The snowy mountains of Gangotri were visible from Saharanpur city, Uttar Pradesh of India after a long time due to improvement of the air quality.

4.2. Positive impact on animals

Pink flamingos returned to Mumbai in huge numbers during the lockdown as people continue to live inside and their numbers were far greater than ever before.

Dolphins were spotted more in cleaner and peaceful rivers at Vikramshila Gangetic Dolphin Sanctuary (VGDS) in Bihar.

In Venice, Italy for the first time in 60 years due to reduced pollution, the exemplified clearness in water quality in the canals resulted in dolphin sightings (Radhika Mehta, 2020) during the lockdown.

Peacocks were seen roaming freely on the road during the nationwide lockdown, in wake of the coronavirus pandemic, in New Delhi.

475,000 endangered Olive Ridley Sea turtles have laid 60 million eggs on the eastern coast of Odisha, India after a long time due to reduced human activity (Radhika Mehta, 2020).

Due to the improvement of the air quality and river water, plant production has also increased because of the availability of proper nutrients through air and water.

4.3. Negative impact on the environment

Evolving medical technology and modern facilities in hospitals to provide better healthcare services have contributed to the subsequent increase in the amount of waste generated from healthcare facilities. “Health Care Waste” or “Bio-Medical Waste” is the waste generated from a medical procedure in health facilities, research centers, and laboratories. Improper management of BMW results in several problems including the spread of infectious diseases and various forms of environmental pollution. It has been found in various studies that 10–25% of BMW is hazardous and that part of the waste poses physical, chemical, and/or microbiological risks to anyone exposed to or associated with the handling, treatment, and disposal of waste (Goswami et al., 2021). The report of the Special Rapporteur on the UN Human Rights Council focuses on the detrimental impact of improper management and disposal of medical waste on the right to life and recommends additional steps that relevant stakeholders could consider to make improvements in safe and environmentally sound management. and BMW dumps. The risk of adverse effects on human

health can also be associated with exposure to highly toxic gas emissions during incineration. Improper operation or deficiencies in the operation of small-scale incinerators can result in incomplete disposal of waste, improper disposal of ash, and dioxin emissions, which can be 40,000 times higher than the emission limits outlined in the Stockholm Convention (Goswami et al., 2021). BMW's management during this pandemic has been highlighted as a major concern by some researchers that could increase the risk of further transmission through different pathways. Covid-19 again raises problems for BMW. As we can see in various media reports that BMW was thrown carelessly. Plastic particles in seawater were already a problem that needs to be tackled for the safety of the aquatic animals but now one can see the used masks and gloves too into the seawater. There is a need for proper disposal and handling of various types of BMWs. Because BMW is another threat to the environment if not handled promptly.

Suggestion and conclusion

The following are the suggestions based on the above discussion:

- It's high time to control the air pollution now or else we have to buy oxygen cylinders for breathing in normal courses in the future.
- The world needs more hospitals, doctors, and nursing staff rather than arms and ammunition.
- Laws related to Environment protection should be strictly followed.
- The population needs to be controlled for controlling the pollution. As behind every issue now the population is one of the reasons.
- Alternative methods should be used to reduce air pollution like the use of biofuel in road transportation.
- Motivating people to use bicycles for a short distance.
- Growing more plantations for improving the air quality.
- BMW should be handled appropriately.
- Awareness is required among the public about the use of conventional resources for controlling air pollution.
- For nature, Covid-19 was a boon as nature get time for healing during lockdown but for human, it was a bane. It was a lesson for us that we should change our attitude towards the environment, or else the environment will pay us back in the form of pandemics, natural disasters, etc.

The researcher would like to conclude her paper by saying that *prevention is better than cure*. If we can prevent our environment from getting polluted then we will be healthy. Healthy food and a healthy environment will be available to us only when we will stop mixing the adulterous substance in our environment in the form of pollution. If we don't control our actions now then again, we have

to face such kind of situation and every time the virus will be more dangerous as we have seen in the past. So, we should *learn from our mistakes in the past, and rectify them in the present, for a safe polluted free environment in future.*

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