

## COVID-19: SOCIETAL IMPACT IN INDIA

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### Abstract

COVID-19 caused due to Novel Corona Virus, is linked to a respiratory disease in humans and has emerged as a pandemic and main affected countries include The United States of America, Brazil, India, France, Turkey, UK, Russia, Italy and Spain are the ten Nations with the most infected cases. US, Brazil, Mexico, India, UK, Italy, and Russia. World Health Organization has recognized India as the global leader in controlling the spread of this devastating disease. Impact of Covid-19 has been observed on education system, economy, tourism, telecom sector, pharmaceuticals as well as mental health. In order to deal with this pandemic COVISHIELD and COVAXIN were recognized as India's most commonly used Covid-19 Vaccines. Covaxin is an inactivated vaccine". After the deadly virus has been delivered, immune cells can still recognize it. The Oxford-AstraZeneca vaccine, known in India as Covishield, has also been approved by the drug regulator. The country's National Institute of Virology and the Bharat Biotech are producing these vaccines. Other vaccines, which have also been used amongst Indian population include Pfizer, Sputnik and Moderna. These vaccines have been efficient enough to reduce the cases of COVID-19 to a great extent.

### Introduction

COVID-19 caused due to Novel Corona Virus, is linked to a respiratory disease in humans and has emerged as a pandemic (declared by WHO) in the first quarter of 2020. According to the most recent reports, crores of individuals have been identified with the symptoms globally, resulting in several deaths and many recoveries of patients. The United States of America, Brazil, India, France, Turkey, UK, Russia, Italy and Spain are the ten

Nations with the most infected cases. US, Brazil, Mexico, India, UK, Italy, and Russia are the top countries with the most deaths recorded [7]. Initially, by wide margins, India was not on the list of infected countries, but recent events have changed it to second place, which is cause for serious concern. The mortality rate is currently under 3%, compared to the global mortality rate of 5.5 percent. This is a significant improvement. However, the spread model is slowly approaching an exponential

trend, resulting in significant loss of lives and infrastructure.

Most of the Nations now regard India as a global leader, and also the World Health Organization has reported that the world is looking to India's policies to control the spread of this devastating disease. Nearly world's one-fifth people lives in India. India makes a significant contribution to global GDP and is one of the world's most influential developing countries, with relatively high economic growth rates. India's strong relations with the majority of the world's countries, as well as its helpful existence, make it an ideal ally for other nations.

As a result, the world is closely watching and monitoring the COVID-19 pandemic in India. There is a need for detailed empirical studies focused on various methods used by Indian administrators from time to time. Two major incidents in recent days have impacted India's lockdown period: a mass migration of workers in between the states and the religious and cultural gatherings resulted in increased covid cases. The Prime Minister communicated with the country's people by devising creative methods and launching various interaction events with a national effect. [3].

### **Impact of Covid-19 On Indian Education System**

There are moments that no one could have expected. Pandemic times are sweeping the world, leaving no place unaffected. They have left an indelible mark on the educational

sector. By the March end of 2020, the pandemic had spread across India, prompting the closing of the majority of schools, colleges, and universities. While the COVID-19 epidemic had many adverse effects on the educational sector, it also had a positive influence that could push forward the educational system and its approaches. This pandemic has paved the way for new ways of transmitting awareness around the world. Many citizens in India don't have access to the internet, and some attend government-run schools that aren't well-equipped. Many attempts were made to use online methods to keep learning at all levels, but it was impossible to make it accessible to everybody. Looking at the positive aspects of the pandemic's educational consequences, I believe that our brain's learning cells have evolved to understand and examine how to keep educating young minds. This quote, attributed to Marvin Minsky, caught my attention on the internet: "You don't understand anything until you learn it more than one way." The quotation was undoubtedly explained during the pandemic, as teachers used a range of teaching and learning techniques. COVID-19 has expanded the usage of emerging technology in education delivery. Institutions of higher learning have shifted to the blended mode of learning and enabled teachers and students to become more tech-savvy. Digital, webinars, soft technology, virtual classrooms, teleconferencing, interactive tests and assessments have become commonplace in places where they were once only identified a decade or more ago.

All stakeholders in the education sector- including administration, software developers, teachers, students and parents,- worked together in unprecedented ways to share information in novel ways. Many people have discovered that those who want global education and exposure to ideas will get it. Travel, tours, and the purchasing of research materials have all been reduced, resulting in cost reductions during these challenging times. Though there was a lot of progress on the technology side of education, COVID-19 had some adverse effects on education [4].

Educational practices are seriously disrupted, and we sensed a great deal of uncertainty and the postponement or delay of tests, academic sessions, and other activities. The so-called co-curriculum was unable to be implemented due to a lack of space. In the modern world of digitalization, teachers who were experts in the text, speaking, chalk, and classroom methodology faced a challenge. They needed to be prepared to face the demands of the current situation and to continue teaching online. Many students have failed to get the technology they need to participate in digital learning. As a result of losing their teaching positions or having their wages withheld, many educators sought alternative employment to support their families. Former teachers are now attempting to fit into every available role.

All improved for educated parents as they helped their children - through slowly - but it's also time to remember the helplessness of parents who could not help their children. The closure of schools during the lockdown resulted

in many children being starving and malnourished, as the provision of a midday meal is a great blessing to many Indian students. Because of the low fee payment, the pandemic posed a danger to educational institutions. Many low-income schools had to shut their doors. Everyone has concerns and questions, such as when life will return to normal. Is the vaccine up to date? Yet life goes on, and education goes on as well. We can see how the coronavirus has wreaked havoc in the world of education. COVID-19 has also proven to be a blessing in disguise for us. The pandemic has created new opportunities, such as increased digitalization. The situation necessitates infrastructure upgrades and knowledge of how to deal with similar incidents in the future.

### **Covid-19 on Indian economy**

The coronavirus pandemic has wreaked havoc on India's economy and resulted in the deaths of thousands of people. Almost all industries have been negatively affected, with a few notable exceptions. A few primary industries are assessed for their impact and possible solutions.

### **Agriculture**

Since the country's backbone is agriculture and is included in the government's critical category, it is estimated that primary agricultural production and agro-input use will be minimal. Several state governments have already made it possible for fruits, vegetables, milk, and other foodstuffs to move freely. Uncertain limits on travel and the halting of logistics vehicles have a significant effect on

online food grocery platforms. In the short term, the steps announced by the RBI and the Finance Minister would be beneficial to both the industry and the workers. In the coming months, on the Indian food sector and the broader economy. Insulating rural food production areas will be a great response to the significant effect of COVID.

### **Tourism**

The Aviation Sector and Tourism sector contribute about 2.4 percent and 9.2 percent of our GDP, respectively. In the fiscal year 2018-19, the tourism industry served approximately 43 million people. The first sectors to be severely impacted by the pandemic were aviation and tourism, facing a possible layoff of 38 million people, or 70% of the total workforce. Both white-collar and blue-collar employment will be affected. According to IATO estimates, travel restrictions could cost these industries about 85 billion rupees. When it comes to contactless boarding and travel technology, the pandemic has sparked a surge of creativity.

### **Telecom sector**

Even before the COVID 19, there were significant changes in India's telecom sector due to short-term price wars among service providers. Owing to limitations, most of the essential services and industries were able to continue operating through the "work from home" policy. As of 2019, the telecom sector employs about 4 million workers and contributes about 6.5 percent of GDP, with over 1 billion connections. Increased broadband

usage had a direct impact on the network, putting strain on it. There has been a 10% rise in demand. Telco's, on the other hand, are expecting a dramatic decline in new subscriber additions.

### **Pharmaceuticals**

Since the beginning of the Covid-19 pandemic, this sector is flourishing, particularly in India, the world's leading generic drug manufacturer. Generic drugs have been hitting the hardest because of the industry's heavy dependence on imports, broken supply chains, and labor shortages exacerbated by social estrangement. Simultaneously, the pharmaceutical industry is suffering as a result of government-imposed export bans on essential drugs, PPE kits and machinery, ensuring adequate supplies in the region. They need medications, combined with their limited availability, which is making things more difficult. In such a desperate time, easing the financial burden on pharmaceutical firms, tax relief, and solving the labor shortage may be the differentiating factors.

Given the scale of pandemic devastation, it's evident that the current recession is unlike any other in recent memory. The market environment would be altered by an accidental drop in the market and enhanced joblessness. Businesses will be able to tread a new direction in this volatile world by adopting new concepts such as "change toward localization, cash recycling, supply chain resilience, and creativity [5].

## Covid-19 and its impact on adolescent mental health in India

The lockdowns resulted in schools remaining closed and online classes began as an alternative which created ideal conditions for children and adolescents to be alone and use the internet more frequently. Parents are worried about their children's mental health as a result of school closures, social isolation, and increased internet use. Increased internet access makes it more difficult for parents to keep track of their children's online activities. Regular and unsupervised internet use has been linked to Adolescents with psychological risk factors engaging in self-harm and suicidal behavior. It causes substantial psychological distress. [1]

In a low-income world, the school setting might be more nutritionally, socially, and developmentally beneficial than the home. In India, school closures have wreaked havoc on teenage lives, bringing many young people into the workforce and likely never returning to school. Sleep disruptions, frustration, inability to focus are all signs and symptoms of mental illness that teachers and parents should be taught to recognize.

Mental health services will then manage any mental health problems that arise, who can use tele-mental health programs aimed at youth, proving to be effective. Furthermore, role sharing and task shifting approaches may be used to strengthen clinical care structures across the prevailing health organizations to deliver mental health counseling to teenagers [2].

## COVISHIELD and COVAXIN: India's Covid-19 Vaccines

**"India's Covaxin, the homegrown government-backed vaccine, has an efficacy rate of 81%, preliminary data from its phase 3 trial shows".**

Even though the third phase of the trial was still ongoing, India's regulators granted emergency approval to the vaccine in January, raising questions from researchers and medical experts. Bharat Biotech, "vaccine's maker", described the new findings as "a significant breakthrough in vaccine discovery, for research, and in our war against coronavirus." "We have now published data on our Covid-19 vaccine from phase 1, 2, and 3 trials involving about 27,000 participants," the company said.

The Oxford-AstraZeneca vaccine, known in India as Covishield, has also been approved by the drug regulator. In early January, the country started the world's most extensive vaccination program. It has vaccinated almost 30 million citizens so far, with the first step prioritizing hospitals and frontline staff. Those over the age of 60 and those between the ages of 45 and 59 who have other diseases are also being vaccinated.

By the end of July, the government hopes to have covered 250 million "priority citizens." Experts warn, however, that vaccine progress has been slow and that the deadline will be missed unless the campaign is scaled up. The vaccine is also being supplied to a variety of other nations, including India's neighbors.

## Working of "COVAXIN"

Bharat Biotech, with 24 years of vaccine making, exports to 123 countries and has 16 vaccines in the pipeline. "Covaxin is an inactivated vaccine", which means it contains coronaviruses that have been killed, rendering it safe to administer. The country's National Institute of Virology provided the sample used by the Bharat Biotech for coronavirus. After the deadly virus has been delivered, immune cells can still recognize it, allowing the defense system to produce antibodies in response to the virus. The dosage is two separated by 4 weeks span. The vaccine should be kept at temperatures ranging from 2 to 8 degrees Celsius [6].

## Controversy around COVAXIN

The controversy started after the vaccine was approved for "restricted use in emergencies in the public interest as an abundant precaution, in clinical trial mode, particularly in the sense of infection by mutant strains" by the regulator. Experts questioned how a vaccine could be accepted for use by lacs of people in an emergency when trials were still being performed. During this period, the **All India Drug Action Network** was "baffled to understand the scientific rationale" behind approving "an incompletely researched vaccine." There were "intense issues arising from the lack of efficacy evidence," **Covaxin** was defended by both the manufacturer and the FDA, who said it was "healthy and offered a robust immune response."

Indian clinical trial laws, according to Bharat Biotech, provide for "accelerated" approval of vaccines following the 2nd phase of trials about "unmet medical needs of severe and life-threatening diseases in the world." It stated that it would release vaccine efficacy data by February, and it has now done so [6].

## COVISHIELD:

The world's largest vaccine producer, India's Serum Institute, is producing the Oxford-AstraZeneca vaccine locally. It claims to be able to produce over fifty million dosages per month. *"The vaccine is prepared from a weakened strain of a common cold virus (known as an adenovirus) from chimps"*. Even though it cannot cause disease, it has been altered to look like coronavirus. When a patient receives the vaccine, the immune system is triggered to create antibodies to fight any coronavirus strains. The two doses of the vaccine, separated by a span of 4-12 weeks. It should be kept at 2 to 8 degrees Celsius.









As a result, it is cheaper to administer than other vaccines. However, the All India Drug Action Network, a patient advocacy organization, argues that the vaccine's approval was hurried because the manufacturer had not conducted a "bridging report" on Indians. According to the company, in February, the company plans to perform a bridging trial of the vaccine in India. Given that the clinical trials that have already been performed included a diverse variety of ages and ethnicities, according to some experts, there isn't any reason to think it won't work as well [6].



**Other Vaccines**

Other vaccines being tested across India at various stages to assess their safety and efficacy include: Zydus-Cadila, based in Ahmedabad, is developing ZyCov-Di. In association with Baylor College of Medicine and Dynavax in the United States by Biological E, India's first private vaccine manufacturer developed a vaccine. In association with HDT Biotech Corporation of Seattle, HGCO19 is the Nation's 1st mRNA vaccine, developed by Genova of Pune. It works by inducing an immune response with bits of genetic code. Bharat Bio-Tech has developed a nasal vaccine [6]

**How some of the Covid-19 vaccines compare**

Company	Type	Doses	How effective*	Storage	Cost per dose
 Oxford Uni-AstraZeneca	Viral vector (genetically modified virus)	x2 	62-90%	Regular fridge temperature	£3 (\$4)
 Moderna	RNA (part of virus genetic code)	x2 	95%	-20C up to 6 months	£25 (\$33)
 Pfizer-BioNTech	RNA	x2 	95%	-70C	£15 (\$20)
 Gamaleya (Sputnik V)	Viral vector	x2 	92%	Regular fridge temperature (in dry form)	£7.50 (\$10)

\*preliminary phase three results, not yet peer-reviewed  
Source: Respective companies, WHO

(Figure 1: Comparison of different vaccines used for Covid-19 and its effectiveness)

**Conclusion**

"Covid-19" has had a wide range of effects, not just on society as a whole. Both rural and urban economies have suffered as a result of the economic downturn. Everyone has seen the

problems that migrant workers face; will they continue after Covid-19? Migrant workers depend on daily wages and have nothing to save that they might use in an emergency. Many of them have already left this planet (isn't it lovely?). Because of joblessness and no money in the cities, those with limited resources started to return to their villages. They walked miles and miles barefoot with pregnant wives and infants. Is it possible for us to feel the discomfort? We are unable to experience the pain, and only those experiencing it can do so. Gig workers, including migrant workers, have faced a similar issue, but it has received less media attention. The world and the online portal have come to a halt as a result of Covid-19, resulting in economic distress.

In addition to the economy, Covid-19 has harmed education, and its consequences will be felt soon. There is a possibility of psychological distress in any pandemic or circumstance that has a broad impact on society. The four-month-long lockdown has shown that "man is a social being," as it has had a psychological impact on individuals, with women and children bearing the brunt of the burden due to family violence.

Several domestic violence incidents were witnessed on the helpline numbers and portal by the victims during the lockdown. Since India is known for its diversity, Covid-19 will have broad and varied effects. Although, if we look at the other side of the coin, COVID-19 has undoubtedly influenced our culture, but only in a negative way? That is something we must carefully examine and cannot be left without a debate. It has been said that "crisis

births shifts that have been pending for many years," which was valid during Covid-19's reign. Things have changed to meet society's needs, which the government has been working hard to do for many years.

The Covid-19 has caused these prime changes in the education sector and the judiciary, whether online or judiciary. However, because of our country's digital connectivity deficit, the benefits of these transformations will be minimal. We should ask ourselves a serious question at this point: What kind of society will emerge after Covid-19? Are there any inequalities? We are not sure, so we will have to get back up and help each other. We must obey the values enshrined in our Constitution's Preamble, namely "Equality, Fraternity, and Integrity," to make our country a much better place on the planet for its citizens and for the entire world.

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