INDIA's Warfare with COVID - The Invisible Enemy

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Abstract*: **Approximately one year back (December, 2019) CORONA virus born and vibrates the world rigorously, affects many people lives, taught many lessons, habitats new manners, new lifestyles, etc. The whole world suddenly turns into the dark side. This research paper discusses the scenario of covid outbreak in the world specifically in India with emphasis on the measures taken by the Indian government in fighting with the covid, the economic impact of covid in India, the helping hands during covid crisis, and the positive side of the covid.***

Keywords: Covid, Corona, Pandemic, INDIA, Warfare, Virus

1. INTRODUCTION

CORONA outbreak 2019 [1] is named as **COVID-19** and is caused by the novel virus 'Severe Acute Respiratory Syndrome CoronaVirus-2 (**SARS-CoV-2)'**[2]. It belongs to the family of corona viruses (CoV) [3]which are non-segmented, enveloped, positive-sense RNA viruses [4], and is the seventh known coronavirus which infects humans.

Initially, Covid-19 originated from a seafood market in the city of Wuhan, Hubei Province, China in the late December-2019 and from then it is infected to humans [5]. Its basic symptoms include casual cold, mild cough, fever, loss of smell and shortage of breath. However, severe infection leads to many serious problems like multi organ failure, breathing difficulty, chest pain and even casus death [6]. Since the virus periodically changes its DNA, simultaneously, its symptoms are also changed. Around 218 countries and territories have been attacked by the virus at the time of writing this paper (23[rd]Nov, 2020). More than 56 million people were attacked worldwide, out of it, more than 1.3 million people were expired as shown in Figures 1 and 2 respectively [7,8]. The outbreak was considered as a pandemic by World Health Organization (WHO) after 11[th]March press meet [9]. WHO provides some guidelines on Infection Prevention and Control (IPC) strategiesto guide covid suspects during difficulties [10].
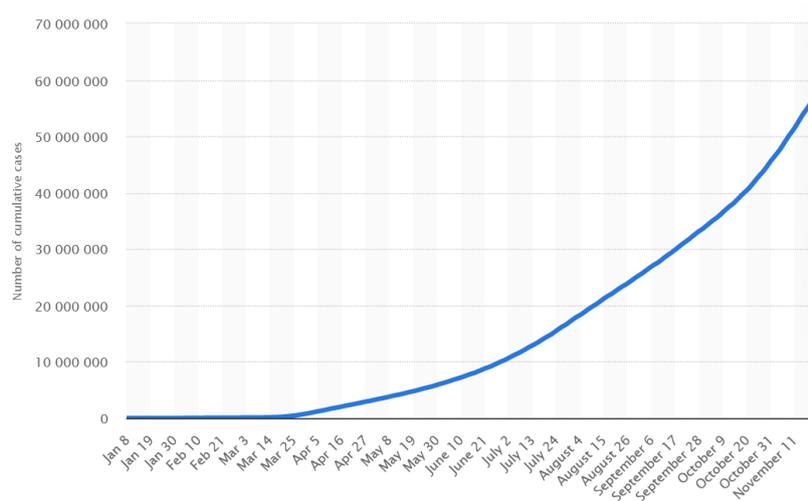
Fig. 1: Number of cumulative cases of coronavirus (COVID-19) worldwide from January 8 to November 19, 2020, by day.
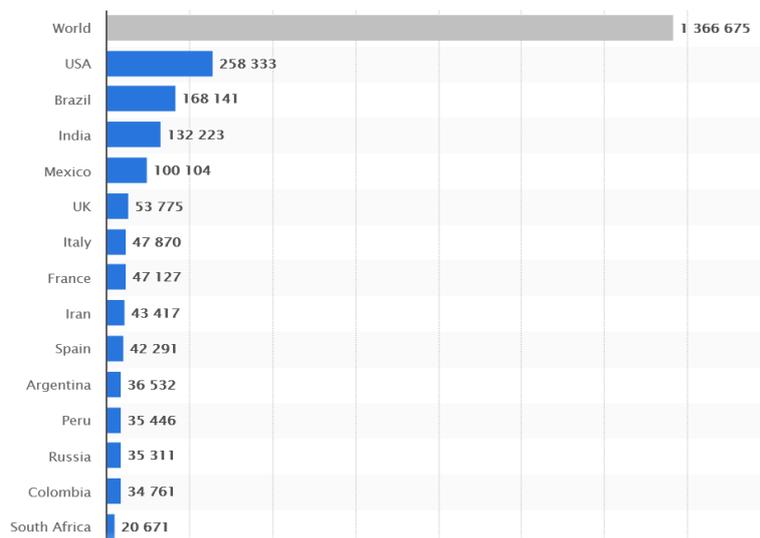

Fig.2: Number of novel coronavirus (COVID-19) deaths worldwide as of November 20, 2020, by country.

Globally, US occupied top position in the list of covidaffected countries with 20.73% of reported covid cases while India is placed at second top most position with 16.13% of reported covid cases as illustrated in Figure. 3 [11]. Specifically, out of 59,002,157 covid cases reported worldwide, 12,589,088cases were reported in US whereas, 9,140,312 cases were reported in India. Similarly, out of 16,831,920 global active infections, 4,873,771 and 443,898 active infections were reported in US and India respectively. Likewise, out of 40,776,358 recoveries reported worldwide, US reports 7,452,616 and India reports 8,562,641recoveries. Lastly, out of 1,393,879deaths reported, 262,701 deaths are reported by US and 133,773 deaths are reported by India as of November 23[rd]2020 as cited in Table 1 [12].
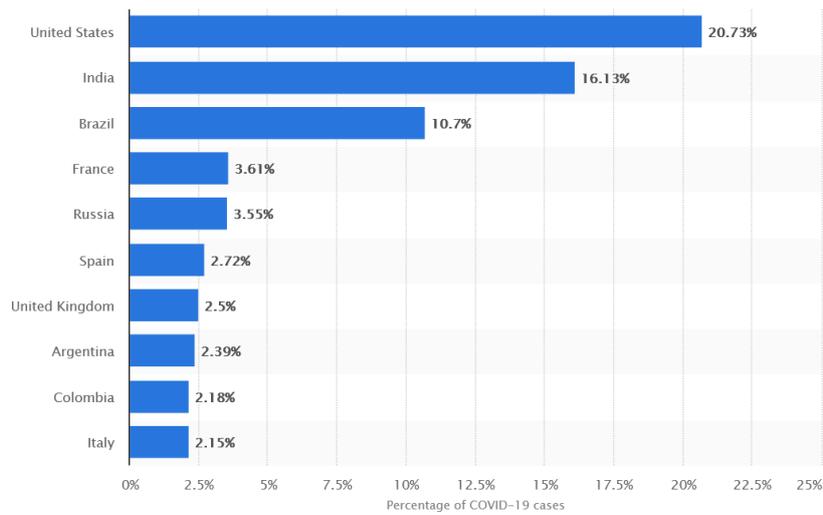
Fig.3: Distribution of coronavirus (COVID-19) cases in select countries worldwide as of November 16, 2020.

Table 1: Number of coronavirus (COVID-19) cases, recoveries, and deaths among the most impacted countries worldwide as of November 23, 2020.

	Total infections	Active infections	Recoveries	Deaths
Total (worldwide)	59,002,157	16,831,920	40,776,358	1,393,879
United States	12,589,088	4,873,771	7,452,616	262,701
India	9,140,312	443,898	8,562,641	133,773
Brazil	6,071,401	469,699	5,432,505	169,197
France	2,140,208	1,941,955	149,521	48,732
Russia	2,089,329	457,707	1,595,443	36,179
Spain	1,589,219	-	-	42,619
United Kingdom	1,512,045	-	-	55,024
Italy	1,408,868	805,947	553,098	49,823
Argentina	1,370,366	137,872	1,195,492	37,002
Colombia	1,248,417	62,198	1,150,932	35,287

The authors in this paper, specially describes the covidcircumstancesin India by giving special emphasis on the measures taken by the Indian government in fighting with the covid, the economic impact of covid in India, the helping hands during covid crisis, and the positive side of covid. The remaining part of the paper is organized as follows. Section 2 discussesabout the covid situation in India, section 3 discusses the measures taken by the Indian government in fighting with the covid, section 4 discusses the economic impact of covid in India, section 5 discusses about the helping hands during covid crisis, section 6 discusses about the optimism effect of covidand lastly section 7 concludes the work.

2. COVID CIRCUMSTANCES IN INDIA

COVID hits India in late January 2020 by three Indian students who travelled from Wuhan to Kerala. Later, several other cases were reported from other parts of the country. Thousands of infected people were being placed in government quarantine centres for treatment. To control the virus spread the government of INDIA has announced the lockdown in the end of March. During this war with the invisible enemy, the health care workers, polices, and sanitary workers, etc. are act as COVID warriors. Further, to identify the severely affected areas, individual states were divided into green, orange and red zones indicating less, moderate and highly effected areas respectively. Besides taking several measures, due to the huge population, INDIA moved to the second top most position in the list of countries having fastest infection rate, based on the rate of increasing new cases and the new deaths as illustrated in Table 2 [13]. However, fortunately the rate of recovery is improved significantly as shown in Figure 4 [14]. It was observed that the top most cases across the country were reported from Maharashtra. Andhra Pradesh and Karnataka followed with relatively lower infection rates [15]. The complete spread of Covid in India is illustrated in the Figure 5 [16].

Table 2: Number and change of coronavirus (COVID-19) cases and deaths among the most impacted countries worldwide as of November 16, 2020.

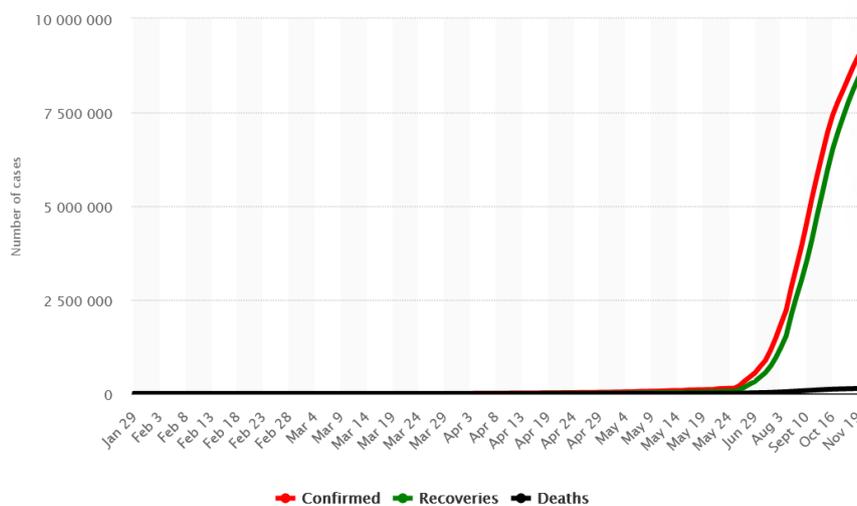|	Total number of infections	Average daily number of new cases in last 7 days	Total number of deaths	Change in average new deaths last 7 days vs. previous 7 days
United States	11,037,777	150,000	246,217	1,100
India	8,845,127	42,000	130,070	490
Brazil	5,863,093	28,000	165,798	490
Russia	1,932,711	21,000	33,184	370
France	1,915,713	16,000	42,601	420
Spain	1,458,591	19,000	40,769	280
Great Britain	1,372,884	25,000	52,026	410
Argentina	1,310,491	9,800	35,436	270
Colombia	1,198,746	7,800	34,031	180
Italy	1,178,529	35,000	45,229	550

Fig 4: Cumulative of the coronavirus (COVID-19) confirmed, recovered and deceased numbers across India from January 29 to November 19, 2020.
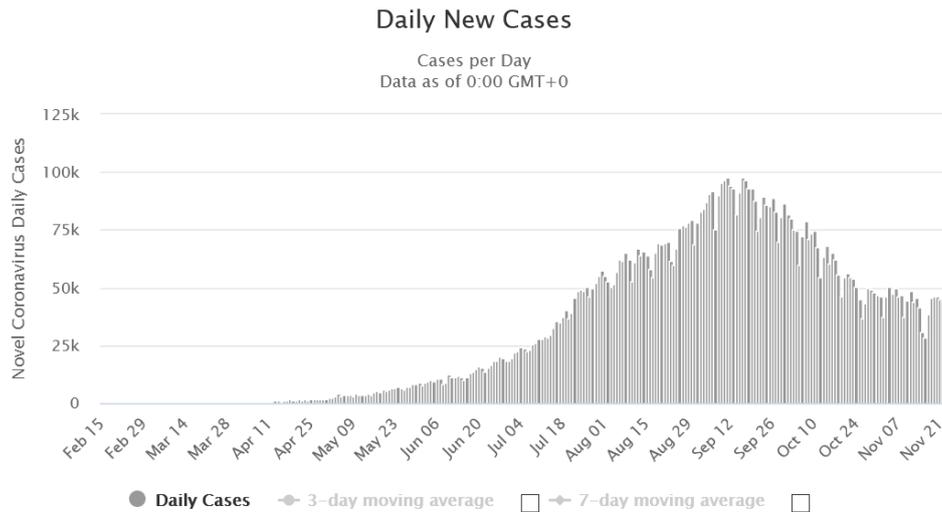
Fig 5: Covid spread in INDIA.

3. MEASURES TAKEN

To protect people, many countries locked their doors and announces lockdown by restricting public gatherings, closing schools, cancelling group events, and encouraging work from homes, etc.Especially, Indian government taken effective measures to control the virus spread.It announces total lockdown at an early stage of covid, that is from the mid night of march 25th, 2020,initially for 21 days [17].Later it is extended up to 31[st]may, 2020, with assurance that the primarywants of the public will be taken care of [18]. The lockdown shut downs all services except the essential services like hospitals, fire stations, police stations, etc. [19].

Meanwhile Indian government strengthens the health care system, introduced new schemes and policies, conducts covid tests at a large scale,and arranged many quarantine centers [20].In addition to all these effective steps, Govt.of INDIA had developed'*ArogyaSetu app*' which identifies covid risk levels based on the GPS location.To energize people, respected Prime Minister of INDIA shri Narendra Modi delivers wonderfulmotivational speeches to make INDIA mentally strong to fight with the COVID. He gives a call to the nation to habituate wearing mask, maintaining social distancing [21], washing hands frequently and encourages people to stay healthy by practicing yoga and also by taking healthy food.

4. THE ECONOMIC IMPACT:

The pandemic badly impacts the global economy, specially, financial sectors, tourism, sports are greatly affected [6]. Especially, this pandemic put the Indian economy at a high risk. Prominent companies in INDIA like Bharat Forge, Ultra Tech Cement, Grasim Industries, Aditya Birla and Tata Motor in India, etc. were reduced their activities. The majorly effected fields areIndian film industry, Agriculture, Tourism, Airlines, Road transport sectors, and Railways, etc. [22] and also many start-up's were badly affected.

The financial crisis during lockdown effects many people badly. Especially, more than Corona, lockdown causes extensive panic in migrated workers and hence requiring the economy to reopen. Nation is unlocked gradually. Unlock 1.0 takes place for a period of thirty days from 1st June to 30th June, unlock 2.0 takes place for a period of thirty one days from 1st July to 31st July, unlock 3.0 takes place for a period of thirty one days from 1[st]August to 31[st]August, unlock 4.0 takes place for a period of thirty days from 1st September to 30th

September, unlock 5.0 takes place for a period of thirty one days from 1st October to 31st October, and lastly, unlock 6.0 takes place for a period of thirty days from 1st November to 30[th]November, 2020 [23].

5. HELPING HANDS DURING THE CRISIS

Many corporate companies like IBM, Google, Amazon, and Microsoft, etc. contribute their part in the global covid war by launching new web terminals that helps in making people more aware of the situation there by reducing the spread of virus [20].

Some publishers offer free access to the documents, article related to COVID while, arXiv, bioRxiv, medRxiv, etc. like services create a quick link to the documents, and to the research papers related to COVID-19 [24].

Many Indian celebrities likeRatan TATA, Sonusood, etc. greatly extend their helping hands and act as real hero's during this tough times. Many noted great hearted people like Mukesh Ambani, Anand Mahindra, Anita Dongre, Anil Agarwal, Anupama Venugopal Nadella, Gautam Adani, Uday kotak, and Azim Premji, etc. from different business groups, LioneiMessi, Cristiano Ronaldo, etc. from sports sectors, Megastar Chiranjeevi, Amitabh Bachchan, Akshay Kumar, Thala Ajith Kumar, Singer Lata Mangeshkar, etc. from film industry were also contribute to lift Indian economy during the outbreak.

6. POSITIVE EDGE OF COVID

A. *Uplifts Indian Culture:*

Covid takes Indian culture and tradition to the global platform. Indian puranas, and scriptures written by ancient saints, guru's, philosophers, etc. reflects Indian culture. 'Namaskram' is one of them now adopted by the whole world to greet others. The hygiene process of 'washing hands and legs when coming from outside' is also adopted by the whole world. Similarly, many healing medicines like turmeric, ginger, cinnamon, garlic, clove, etc. from Indian kitchen [25] were considered and followed by the whole world as preventive medications for covid.

B. *IT opportunities:*

This pandemic creates worldwide health emergency and leads to the racing of inventing many health kits, tools, etc. In addition to the efforts made globally to develop an effective Covid vaccine, IT researchers made primary efforts to fight with covid [20]. Covid opens the doors of opportunities into the field of AI, Big-data analytics, IoT, E-commerce, Robotics, Cloud computing [26], Cyber security, Blockchain technology, Federated learning, etc. More research is carryout on outbreak prediction, Infection spread tracking, Covid-19 diagnosis/treatment, Vaccine/drug discovery, Mobile-based technology for detection and surveillance, people motion monitoring, and neutralizing antibody discovery, etc [20].

C. *Digital platforms:*

To avoid covid risk person to person direct contact and direct communication should be avoided and that should be done only by relying on the digital platform. Every process should be transformed into the digital platform. E-commerce services [27] like Amazon, flipkart, DMart, Big Basket, Big Bazaar, Grofers, etc.,social media services [28] like Whatsapp, telegram, facebook, twitter, Instagram,We-chat, Skype, LinkedIn, Youtube, etc.,and OTT services [29] like Netflix, Amazon prime, Hotstar, Aha, Mx player, Dinney+hotstar, etc.have significantly extend their services more during this covid time.

7. CONCLUSIONS

Corona virus enters the human body through nose or mouth and self-replicateitself immediately after entering into the body and it directly impacts the human lungs. 'Survival of the fittest' and 'survival of the fastest' are the terms associated with the covid. The one who incorporates healthy life styles like taking good food, wearing masks and maintaining social distancing, and practicing yoga is the fittest person and can survive safely during the pandemic. Similarly, the one who quickly amicable to the quick new changes required in the work environment can economically survive in post-covid.

The collective effort of private, government, NGO's, charities, and volunteers etc. helps India to become stronger in the war with the *invisible enemy*. As many bio-medical companies are strongly trying to produce effective vaccine, lets hope the covid vaccine will reach us soon and we all will go back to our normal lifes.

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