Review on COVID-19: A Pandemic Situation

Abstract:

COVID-19 is a pandemic, a global health disaster, and the biggest concern humanity has encountered in the 21st century. The new corona virus illness COVID-19 has become the latest pandemic, first identified in Wuhan, China, and progressively spreading around the world. This virus evolved from an animal virus and subsequently adapted the capacity to pass from person - to - personThis infection has propagated to every corner of the earth, wreaking devastation and generating panic among the population. The outbreak has hampered various aspects of human life be it livelihood, financial, health status including mental as well as physical health. Therefore, every country has made significant efforts to halt the transmission of novel corona virus. The first thing to look for is an equilibrium amongst health protection and limiting socioeconomic damage as a result of this catastrophe. Governments, scientists , biochemists, researchers and others have worked day in and day out to find strong solutions to control the pandemic. Developments are being made in context of effective treatments, reliable and sensible diagnostic tools and prophylactic measures. In the spirit of partnership, we must all contribute to the protection of this situation. The study aims at evaluating various articles related to covid-19 and its impacts on various aspects of human development and recent advancements in strategies to tackle and prevent the further rise in covid-19 cases.

Keywords: Global health crisis, contagious, socio-economic disruption, mental health, vaccination, pandemic, corona virus, India

Comment [L1]: 1.what type of research? such as literature review or others.
2. What data analysis technique were used? for example interactive data analysis techniques from miles and huberman or other types.
3.what data collection techniques were used?
4.What conclusions can be drawn from the study?
5.what contribution can be made from this study?

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Introduction:

SARS i.e; severe acute respiratory distress syndrome is the first major illness of the 21st century to pose a danger to global health, with the possibility to become a worldwide phenomenon. The illness initially appeared in Guangdong Province of China, in middle of November 2002.(1) The novel coronavirus, commonly known as the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has proliferated rapidly around the world since its emergence in China.(2) Thus far in the 21st century, humans have experienced three devastating pandemics linked to new coronaviruses: SARS, Middle East respiratory disease (MERS), and COVID-19. All of these viruses, which are responsible for causing acute respiratory tract infections (ARTIs), are highly contagious in nature and/or have caused high mortalities Though it's unclear how SARS-CoV-2 has transferred from bats to people, fast person to person dissemination has been extensively documented.(3) Researches have indicated that SARS likely originally developed in Guangzhou's

regional cities, spreading for at least two months before triggering a large spread in Guangzhou proper. Sera investigations and viral culture indicated that the major pathogens in these early instances of SARS was SARS-CoV. The genomic examination of these SARS-CoV specimens revealed that they belonged to two distinct subtypes, one strongly linked to that observed in Hong Kong and other nations, and one that did not appear to have transmitted to persons in other locations.(4)

In February 2020, the first incidence of covid-19 in India was found when a group of Indian students studying in China were rescued and transported to Kerala, a state in India. Three days later, a student tested positive for covid-19, making him India's first case.(5) In February, no major expansion was seen. However, on March 4, 22 additional cases were identified, the majority of which were amongst an Italian tourist delegation. The spread of the virus accelerated after that and expanded over the whole Parts of india, with the majority of cases connected to persons having a travel history from impacted nations. The very first death occurred on March 12, when a 76-year-old male arrived from Saudi. Since then, the illness has advanced at a fluctuating rate across all States of the country, with no part of the nation untouched.(6)

At the state and local level, COVID-19 planning and reaction have varied. Kerala has used comprehensive testing, tracking the contacts, and public engagement to prevent the disease and ensure a relatively low fatality rate, building on its history with the Nipah virus in 2018. It has also established numbers of migrant worker emergency housing. Because of Odisha's historical exposure to natural catastrophes, disaster preparations were already in place and have been reconditioned. Maharashtra has utilised drone technology to check physical separation during lockout and has implemented a group confinement approach: if 3 or maybe more patients are identified, all residences within three kilometres are inspected to discover more cases, track contacts, and promote awareness.(7) Currently, more than 200 nations are afflicted by the covid-19 pandemic, and each nation have a traveller background from China or another affected nation. SARS-CoV-2 is mostly concentrated in urban cultures, but it is also spreading to rural and isolated places by travellers from urbanized to country areas. Intervention measures for this form of infectious disease outbreak include isolation, quarantine, social distance, and local restriction.(8)

What's really crucial to understand is that though this condition causes fast respiratory distress in a small percentage of individuals, the small number might signify a hard time dealing with in terms of infrastructure and manpower on a worldwide scale. Since we've observed the disease's early pattern, it is believed that it's time to develop some standards for the containment, screening, and cure of these individuals, both worldwide and regionally. Anti - viral antagonists are being studied in order to determine their effect against COVID-19. The Indian Council of Medical Research approved the usage of lopinavir and ritonavir in cases with severe respiratory distress or organ failure.(9)

Given the 2nd most populated country, India had been looked with an concerned in context to the covid pandemic as the virus is highly contiguous in nature. There was progressive surge in the numbers of people affected with covid-19 which created hurdles in various aspects of the human society. This pandemic had serious impact over the economy, livelihood, mental health and various other aspects. This also reflected loopholes in the health-care and government systems giving us the lesson that will be helpful in preventing such havoc situation the future. Different

strategies has been adopted and developed over the course of time that helped in controlling the spread of corona virus to some extent. Vaccination being the forefront prophylactic measure that allowed some relaxation of this pandemic situation.

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Origin of Corona virus

SARS, which first surfaced in Guangdong Province of China in November 2002, moved fast to other parts of the globe via air travel when it arrived in Hong Kong at the end of February 2003.(1) Many of the earliest instances were linked to a seafood market in Huanan, China, which also dealt in live animals. China notified the WHO of this sudden surge on Dec 31, 2019 thus, the market was shut on Jan 1, 2020.(2) The first cases in humans infected with coronavirus were reported in 1960 and it was thought to be the cause of the common cold. Prior to the occurrence in 2002, multiple coronavirus subgroups have been confirmed to infect humans, causing minimal respiratory symptoms. After ten years, in 2012, new corona-virus disease outbreak known as Middle Eastern respiratory syndrome (MERS-CoV) was discovered in Saudi.(3) On November 16, 2002, the first case of SARS that met the WHO classification was reported in Foshan, a city roughly 20 kilometres from Guangzhou. On On December 17, 2002, a cook from Heyuan working at a restaurant in Shenzhen was diagnosed with SARS, becoming the second verified case.(4)

Timeline of spread in India

On 18 January 2020, when the World Health Organization (WHO) released its first announcement on the outbreak of a new corona virus in Wuhan, China, few local governments in India paid close notice. However, K. K. Shailaja, the modest lady in charge of the health ministry in Kerala, was aware that many Kerala students were studying at Wuhan University, and she realised the devastation an epidemic might wreak. Shailaja had summoned a meeting of her fast reaction team, set up a control room, and activated surveillance teams by the 24th of January. The first batch of students returned from Wuhan on January 27. Three days later, one of them tested positive for COVID-19, making India the country's first confirmed case.(5) Since then, it has spread at a fluctuating rate across all Indian states, with no part of the nation untouched. The major cities of New Delhi, Mumbai, Ahmedabad, and Chennai have seen the largest percentage of cases. As the outbreak in India progressed, a significant point of contention was community transmission.(6) Person-to-person spread via droplets as well as interaction with airborne particles appears to be the most important mechanism of viral propagation.(9)

The Lockdown

India acted quickly to block its international borders and impose an emergency curfew, which WHO applauded as "strong and timely".(7) The Government of India (GOI) announced a nation-wide lockdown beginning March 25, 2020 which then was extended until May 3, 2020.(8) The cost of a nation-wide lockdown to contain the infection was high, as measured by rising unemployment, possible financial crisis, major government shortfalls, stress on banks and corporations, alienation of the citizens, psychological issues, abuse and exploitation, fatalities, desolate funerals, and rising political conflicts in and between nations.(10) Protecting oneself and others from a highly infectious disease like COVID-19 is dependent on following the suggested protocols.(11) Using an infectious illness paradigm, resisting the infection entails recognising the

infected persons and making them non-infectious transfer of the disease to others can be prevented, hence breaking the chain of infection.(12)

Impact of lockdown

According to the initial reports , Shutdown has been linked to psychology of humans. Stress and despair were identified to be psychological reactions during the Corona virus pandemic. Lockdown limits, in particular, have been found to have a favourable influence on air and water quality.(13) Social relationships such as those between a teacher and a student, a doctor and a patient, a landlord and a tenant, a boss and his subordinates, and a factory owner and a worker have all been influenced to some level.(14) This epidemic has affected every element of human society. The extraordinary demand on health-care systems, combined with jobs being lost, business failure, and the global economic slump, has become a global phenomena.(9) COVID-19 has an impact on corporations, and institutions globally, inadvertently impacting economic sector and the world's financial status. As a result of disorganized government operations and shutdowns, the distribution network has been interrupted.(15) Millions of migrant labourers began fleeing Indian cities following the announcement of lockdown dated March 25, 2020, creating a breeding grounds for a surge in extreme stress, panic, despair, alcohol abuse, and self-harm among these individuals.(16) Administrative and policy analysts were kept up to date on new transportation solutions that would allow migrant workers to securely return home when the situation improved.(17) The first lock-down phase was 21 days which began on March 24, and this lock-down scenario had a detrimental impact on the economy since individuals have lost their jobs and are all experiencing financial troubles.(18)

Developments in covid-19 control strategies

As on 28th november 2021 status across india: total covid cases were 3,45,72,523, active cases = 1,05,691, mortality rate = 1.36% (4,68,554), total vaccination doses = 1,21,94,71,134**.** (19)

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Vaccines, if produced and distributed effectively, are one of the most potential remedies to the Covid-19 crisis.(20) Number of vaccine technologies are currently researched globally, including non-replicating vectors, Deoxyribonucleic acid, ribonucleic acid, molecular structures, denatured virus-like particles, and live-attenuated vaccines.(21) While nasopharyngeal/oropharyngeal swabs are approved samples for diagnostic procedure which carry a disadvantage of exposing health related professionals greater proportion of persons potentially affected with virus while also being uncomfortable for the patients. To address these issues, specimens of saliva as a preferable technique of collection of sample have been offered as an alternative. Following that, another research created three new assays with the RdRp/Hel-based test demonstrating improved sensitivity and detection.

Among drug-based therapeutic options, the broad-spectrum antiviral chloroquine and its derivative hydroxychloroquine, as well as remdesivir and chloroquine, have attracted considerable attention. Corticosteroids are a new family of potential medications that have lately sparked a lot of attention. plasma (CP) therapy, in addition to pharmacological treatment, is being promoted as a therapeutically beneficial method.(22) We must enhance our healthcare system and strengthen the country's research lab facilities for identifying and diagnosing emerging

maladies, forecasting outbreaks, increasing the number of beds with O2 delivery, ICU facilties, oxygen tanks, and disease-control measures in total. Similarly, the attention on COVID health conduct, containment, contact tracking, screening, and isolation must be maintained.(23)

Result :

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The origin of covid-19 is still unclear, however it is certain that it originated in China, as determined by studying several covid-19-related papers. This pandemic has brought to light several flaws and mismanagement in the world's operating systems. Every area associated to human progress has experienced significant losses and hardships, causing millions of people throughout the world to suffer. Furthermore, governments, scientists, biochemists, healthcare professionals, and others are working throughout the world to properly contain the outbreak. To provide some alleviation, new techniques have been implemented. Social distancing, regular washing of hands, using face and other proposed guidelines still remains the major strategy combined with newly developed vaccines against covid-19, treatment protocols and diagnostic tools.

Discussion:

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Singhal T et al have expressed worry that zoonotic virus and pathogen outbreaks would likely continue in the future. As a result, in addition to containing current pandemic, efforts should be undertaken to develop integrated strategies to avoid future illnesses of zoonotic origin.(2)

In their analysis, Ram et colleagues found that the COVID-19 epidemic exemplifies the traditional Hamletian dilemma for governments when lives and livelihoods are contending. In order to meet the COVID-19 difficulties, India is actively studying a number of pharmacological, biotechnology, and immunological solutions. (6)

According to Jagjeet et al, inadequate awareness of disease transmission, disobedience with instructions, and pessimism due to a decreased perception of risk may put these people and others in danger, implying that proper and sufficient knowledge is essential for keeping oneself and others safe.(11)

Narain J P et al proposed four strategies to avoid future pandemics. Invest first in public health, then in preparation and reaction capacity at all times, and third in unleashing the great potential of institutional arrangements and individual specialists. Fourth, in order to achieve self-sufficiency in diagnostics and therapeutics, Finally, scientific and evidence-based policymaking should be followed.(12)

Monika et al proposed in their study's conclusion that social distance, attempting to avoid or rescinding events, and using face masks and sanitizers should be the norm until the virus is eradicated. Because the economy is currently paralleling human social behaviour, the responsibility for restoring economic activity does not fall solely on the government.(18)

According to Dhama et al, while vaccines are an efficient method to the COVID-19 pandemic, developing vaccinations is just half of the issue. Vaccine approval must also be universal. This acceptance necessitates more than merely making secure and reliable immunizations. It is a complicated social enterprise that involves extensive involvement around the human aspect and

the efforts of US politicians, national, state, and regional public health officials, philanthropic donors, corporate and civic groups, research groups, and unconventional partnerships.(21)

According to Shreepadmanabh et al, the development of accessible juncture testing tools tailored for limited settings remains a vital need. Cellular lysis-free processes, relevant and effective and accurate bioassays, enhanced specimen collecting and processing techniques that reduce dangers to hospital workers, and prepared kits that do not require technical skill, among other prospective advancements, might help achieve this.(22)

Joshi et al. expressed worry that achieving self-sufficiency in COVID vaccines manufacturing and marketing in India may be crucial, and this is probably doable given that at least 3–4 Indian COVID 19 vaccines are projected to be ready by the late 2021. We will need to address the underlying issues causing vaccination reluctance and develop reliable evidence to alleviate it(23). Numerous studies have addressed the critical issues of Covid 19 pandemic(24-29).

Conclusion:

Because COVID-19 is very contagious, we must keep a safe distance from other individuals and wash our hands often. The government is also making special measures to mitigate this damage and enhance the country's overall status. This pandemic has been a nightmare to forget, as it has caused troubles in many facets of human growth and development, including personal, mental health, social security, economic development, and so on. At the same time, the shutdown teaches us numerous valuable lessons. Humans have trained to deal with adversities with such a positive outlook, therefore I hope these teachings remain with us throughout our lives. Every tragedy has an end, and this one will be over soon. Efforts are being undertaken to build a strong defence against the covid problem. Efforts are being made to develop effective diagnostic tools, treatment techniques, and prophylactics. As of present, vaccination has been shown to be an effective covid-19 prophylactic when paired with social awareness and adhering to covid norms that have been recommended. Now is the time for worldwide cooperation and assistance, especially among vulnerable members of various social orders, particularly in the growing and developing nations. Together, we can tackle the pandemic's interrelated medical, social, as well as financial consequences and foresee it from escalating into a long-term social and food security calamity, with the possible agony of previously made gains picking up.

Comment [L8]: do not use the prefix "because", please use another word that is better.

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Comment [L9]: Pay attention to the journal template used. whether the reference uses APA writing or uses other references. Better to use Mendeley.

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