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Editor- Dr. R. V. Bhole

'Ravichandran' Survey No. 101/1, Plot No.23

Mundada Nagar, Jalgaon (M.S.), India 425102

Journal of Research and Development

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Impact of COVID-19 Pandemic Related lockdown: Present and Future



Editor: Dr. R. V. Bhole

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(M. S.) 425102

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Dr. N. B. Sonawane

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VICE-CHANCELLOR'S MESSAGE



I am happy to know that Arts, Commerce and Science College, Pimpalner is organising Online One Day Multidisciplinary International Conference on “Impact of Covid-19 Pandemic Related Lockdown” on 16th May 2020. It is the motivation being given to the academicians and students to share their views on the present scenario of pandemic related lockdown.

I am sure that deliberations in this conference will play an important role in addressing various important topics of pandemic related lockdown specifically on the most important topic i.e. effect of outbreak of corona virus on education/student psychology.

I wish the Online One Day Multidisciplinary Conference a grand success.

Prof.P.P.Patil
Vice-Chancellor
Kavayitri Bahinabai Chaudhari
North Maharashtra University, Jalgaon

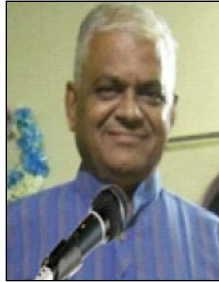
JOINT DIRECTOR'S MESSAGE



It is glad to know that Karm. A. M. Patil Arts, Commerce & Kai. Annasaheb N. K. Patil Science Senior College, Pimpalner, Tal-Sakri, Dist.-Dhule, Maharashtra, India is organizing Online One Day Multidisciplinary International Conference on “Impact of COVID-19 Pandemic Related Lockdown: Present and Future”. COVID-19 has emerged as a pandemic seen never before, which lead to loss of millions lives. We need to show our strength and have to defeat COVID-19 in any case. As per WHO predictions, the disease has to persist for a longer period. Thus, it is need of hour that we have to change our life style in such a situation and have to emerge as victorious. Online academic activity is one of the ways we can update ourselves in the situation of the pandemic. The initiative taken by the principal and his teams in terms of organizing an International conference is appreciable. I wish a grand success to the conference. Maintain the personal hygiene, stay home and stay safe for the nation.

Dr. Satish Deshpande
Joint-Director Higher Education
Jalgaon

MESSAGE



Its indeed pleasure that, Pimpalner Education Society's Karm. A. M. Patil Arts, Commerce & Kai. Annasaheb N. K. PatilSciernce Sr. College Pimpalner, Tal- Sakri, DistDhule (M.S.) India has organized Multidisciplinary Online International Conference on "IMPACT OF COVID-19 PANDEMIC RELATED LOCKDOWN : PRESENT AND FUTURE " ON 16TH May 2020. Friends we are going through very critical situation, covid-19 pandemic disturbed lives of all people irrespective of national, class, region, caste & language. The only language is in function today is the language of humanity. Now today this is an urgency to discuss present & future impact of covid-19

I appreciate the Principal Dr. S. T. Sonawane& all other organizing committee to organize such a important issue which is raised today. Organizing online conference is the need of today, because we have to follow new normal i.e. physical distancing & several other precautions. This is thought process in the pandemic situation. The online multidisciplinary international conference is going to provide platform to the teachers, research scholar's stakeholders, and academicians to promote interaction with eminent invited speakers on the theme which is very much important to overcome the present situation. I thank such a academic discussion & exchange of thoughts will surely suggest some solutions to this problem.

We all are observing social distancing to overcome 'Corona'. I salute to Doctors, Nurses, Police, swifter's, other pandemic staff as they are super Heroes today in lockdown. It is affected on agriculture, economy, small businesses etc. Covid-19 have engulf entire globe as such.

On this occasion, I express my best wishes to the President, Pimpalner Education Society, Principal of this college, organizing committee & delegates of this conference.

I wish the online conference for a grant success.

Mr. Dilip Ramu Patil,
Management Council Member,
K.B.C.N.M.U., Jalgaon.

PRESIDENT'S MESSAGE



With immense pleasure and pride, I extend greeting to all of you on this occasion of one day multidisciplinary international conference on “IMPACT OF COVID-19 PANDEMIC RELATED LOCKDOWN : PRESENT AND FUTURE “ ON 16TH May 2020.

In 1952 a great visionary Late Karm. Bandu Bapuji Alias, Shri. Ananadrao Manikrao Patil, Late Kai. Annasaheb N. K. Patil & Late Dadasaheb V. K. Wani sowed the seed of Pimpalner Education Society. Pimpalner Education Society is one of the leading & old educational institution. This dedicated devoted team laid the strong foundations of Late Dadasaheb V. K. Wani Primary, Karm. A. M. Patil Secondary & Higher Secondary School, Jr. College, D.Ed College YCMOU Centre, Hostel for tribal girls & boy's, M.C.V.C. center, Karm. A. M. Patil Arts, Commerce & Kai. Annasaheb N. K. Patil Science Sr. College. We owe strength, standing reputation today to all these path breakers and for sighted committed leaders of the society. There is indeed no doubt that without their resourceful relentless efforts, we wouldn't been able to chart this path full of glories and growth.

It is our delight that we organize the one day online multidisciplinary international conference on the today's burning issue i.e. Pandemic Covid – 19. The virus affected all the world today. The Covid-19 like demand threats all the world, lakhs of people are infected and thousands of people are died all over the world. This virus spreads through human contact. The medical staff, paramedical staff, security officers & police, those who serve infected people are also infected & lost their lives. No medicine, no vaccine only prevention is there by using mask, regular hand washing, social distancing etc. All over the world lockdown policy is adapted, life style of human beings is totally changed by this virus. Work from home policy emerged. Taking it to be consideration we organize the online conference.

I congratulates & appreciate the efforts of Principal Dr. S. T. Sonawane that he organized mega event along with team & staff. On behalf of education society, I would like to extend good blessing, best luck & success. I wish you enjoy this current feast of knowledge. Wishing best of luck & success of the conference.

Mr. Balasaheb R. N. Shinde

President, Pimpalner Education Society, Pimpalner, Tal - Sakri

PRINCIPAL'S MESSAGE



We are happy to welcome you to online one day multidisciplinary international conference on “IMPACT OF COVID-19 PANDEMIC RELATED LOCKDOWN: PRESENT AND FUTURE “ON 16TH May 2020. Organized by Pimpalner Education Karm. A. M. Patil Arts, Commerce & Kai. Annasaheb N. K. Patil Science Sr. College Pimpalner, Tal- Sakri, Dist- Dhule (M.S.) India.

Since, June 1983 Pimpalner Education society has been making pioneering effort in establishing higher education. Our institute is reaccredited by NAAC, Bangalore with ‘B’ Grade status. College is well known for its academic excellence. Many past students of our college have excelled in the verius field of academic activities, sports & cultural activities.

My college is in tribal zone on the border of Gujrat, The proposed conference basically on today’s burring problem covid-19 pandemic & it should be huge pandemic in the 21st century, which threatened the world very dangerously. It affected not only routine life of human being but also it becomes so fatal that lakhs of people are infects and thousands of people died day by day all over the world. There are difference of opinion about the symptoms of this pandemic. All the world is trying to control over it by using different ‘lockdown policies’. So work from home polices emerge in this period. With keeping these policies in our view our college Karm. A. M. Patil Arts, Commerce & kai. Annasaheb N. K. Patil Sciernce Sr. College Pimpalner organizing online one day multidisciplinary international conference on covid – 19 pandemic.

The conference besicallly aims to develop better intractions on the topic among the educationalists, researchers, professors, academicians etc. from the different fields. They should provide their valuable inputs in the form of research articles, papers, reviews etc., which will be published in special issue of multidisciplinary international level referred journal i.e. ‘Journal of Research on Development. I would like to extend my special thanks to chief editor of this Journal Dr. R. V. Bhole, Jalgaon. Here, I can also make a confident statement that the collection of research papers gives the wide range of information about covid-19 pandemic.

On this occasion, I also appreciate the able support extended by our Hon. President Balasaheb R. N. Shinde and all the members of the management of Pimpalner Education Society. I thanks all the invited speakers, delegates, researchers, teachers and all participants who made their valuable contribution in the International mega event. I also thankful to my organizing team members, chairman of the editorial board, all my teaching & non-teaching staff who have taken efforts for arranging this international event.

Thank you very much.

Prin. Dr. S. T. Sonawane

Karm. A. M. Patil Arts, Commerce & Kai. Annasaheb N. K. Patil Science Sr.
College, Pimpalner

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Preventive strategies for coronavirus "COVID-19" infection

K. Ashok Kumar

Department of Biotechnology, Krishna University,
Andhra Pradesh, India

Abstract -

Coronavirus has left everybody on edge about their security. With the measure of falsehood out there, it has been hard to make sense of which one to notice to and which one to maintain a strategic distance from. This article gives information the right facts about Coronavirus and individual role in prevention of Coronavirus infection.

Key words - Coronavirus, infection, prevention, individual role.

Introduction -

Coronaviruses infections having a place with the group of Coronaviridae, which Human coronaviruses can cause a typical cold, while others cause progressively extreme disease, (for example, MERS - Middle East Respiratory Syndrome and SARS – Severe Acute Respiratory Syndrome). On February 11, 2020, the WHO Director-General, Dr. Tedros Adhanom Ghebreyesus, reported that the disease about by this new CoV was a “COVID-19,” which is the abbreviation of “coronavirus disease 2019”. In Wuhan, which is located in China Hubei area, was first reported to the WHO Country Office in China. In increasingly extreme cases, contamination can cause pneumonia, serious intense respiratory condition and now and then demise. Standard proposals to forestall the spread of COVID-19 incorporate successive cleaning of hands utilizing liquor based hand rub or cleanser and water; covering the nose and mouth with a flexed elbow or expendable tissue when coughing and sneezing and maintaining a strategic distance from close contact with anybody that has a fever and cough.

Structure of Coronavirus -

Coronavirus virions are spherical to pleomorphic wrapped particles. The envelope is studded with anticipating glycoproteins, and encompasses a center comprising of framework

protein encased inside which is a single strand of positive-sense RNA (Mr 6×10⁶) related with nucleoprotein. The envelope glycoproteins are responsible for attachment to the host cell and carry the main antigenic epitopes¹.

Characterization -

The coronaviruses were initially assembled into the family Coronaviridae based on the crown or halo-like appearance given by the glycoprotein-studded envelope on electron microscopy. This order has since been affirmed by one of kind highlights of the science and replication of these infections. Most human coronaviruses can be categorized as one of two gatherings: 229E-like and OC43-like. These vary in both antigenic determinants and refined prerequisites: 229E-like coronaviruses can for the most part be detached in human early stage fibroblast societies; OC43-like infections can be segregated, or adjusted to development, in nursing mouse mind. There is minimal antigenic cross-response between these two kinds. They cause free plagues of vague illness².

Transmission of virus -

Since the primary instances of the CoVID-19 disease were connected to guide presentation to the Huanan Seafood Wholesale Market of Wuhan, the creature to-human transmission was assumed as the principle system. In any case, resulting cases were not related with this introduction component. In this manner, it was inferred that the infection could likewise be transmitted from human-to-human, and suggestive individuals are the most regular wellspring of COVID-19 spread. The chance of transmission before indications create is by all accounts rare, in spite of the fact that it can't be prohibited. Also, there are recommendations that people who stay asymptomatic could transmit the infection. This information proposes that the utilization of

segregation is the most ideal approach to contain this epidemic.

Similarly as with other respiratory pathogens, including influenza and rhinovirus, the transmission is accepted to happen through respiratory beads from coughing and sneezing. Airborne transmission is likewise conceivable if there should be an occurrence of extended introduction to raised vaporized focuses in shut spaces. Examination of information identified with the spread of SARS-CoV-2 in China appears to show that nearby contact between people is vital. The spread, truth be told, is principally constrained to relatives, human services experts, and other close contacts.

In view of information from the main cases in Wuhan and examinations directed by the China CDC and neighborhood CDCs, the hatching time could be for the most part inside 3 to 7 days and as long as about fourteen days as the longest time from disease to indications was 12.5 days (95% CI, 9.2 to 18). This information likewise indicated that this novel epidemic multiplied about at regular intervals, while the fundamental proliferation number (R_0 - R nothing) is 2.2. All things considered, every patient transmits the disease to an extra 2.2 people. Of note, estimations of the R_0 of the SARS-CoV pestilence in 2002-2003 were around 3. It must be stressed that this data is the consequence of the primary reports. In this manner, further examinations are expected to comprehend the components of transmission, the incubation times and the clinical course, and the term of infectivity³⁻⁴.

Preventive procedures -

Preventive procedures are centered on the disconnection of patients and cautious contamination control, including suitable measures to be received during the conclusion and the arrangement of clinical consideration to a tainted patient. For example, bead, contact, and airborne precautionary measures ought to be received during example assortment, and sputum enlistment ought to be stayed away from.

The WHO and different associations have given the accompanying general proposals:

- Avoid close contact with persons experiencing intense respiratory diseases.
- Wash your hands every now and again,

particularly after contact with tainted individuals or their condition.

- People with infection of intense aviation route contamination should stay away, spread hacks or wheezes with dispensable tissues or garments and wash their hands.
- Individuals that are immunocompromised ought to maintain a strategic distance from open social affairs.
- The most significant procedure for the crowded to attempt is to as often as possible wash their hands and utilize convenient hand sanitizer and keep away from contact with their face and mouth in the wake of cooperating with a conceivably polluted condition.
- Human services laborers thinking about tainted people ought to use contact and airborne precautionary measures to incorporate PPE, for example, N95 or FFP3 veils, eye security, outfits, and gloves to forestall transmission of the pathogen.
- Strict individual cleanliness measures are vital for the counteraction and control of this contamination⁵.

Guidance on the Use of Masks -

This gives counsel on the utilization of masks in communities, during home consideration, and in human services settings in regions that have revealed instances of COVID-19. It is proposed for people in the community, general wellbeing and disease counteraction and control experts, medicinal services directors, human services laborers (HCWs), and network wellbeing laborers. This refreshed adaptation remembers a segment for Advice to leaders on the utilization of masks for healthy individuals in community settings.

People with symptoms -

Should wear a medical mask, self-confine, and look for medical guidance when they begin to feel unwell. Indications can incorporate fever, fever, fatigue, cough, sore throat, and difficulty breathing. It is imperative to take note of that early side effects for certain infected tainted with COVID-19 might be extremely mild; Follow directions on the most proficient method to put on, take off, and discard medical masks. Follow all extra preventive

measures, specifically, hand cleanliness and keeping up physical distance from people.

Home consideration For COVID-19 patients with gentle sickness, hospitalization may not be required. All patients thought about outside clinic (for example at home or non-conventional settings) ought to be told to follow nearby/local general for home disengagement and come back to assigned COVID-19 medical clinic in the event that they build up any compounding of sickness. 7 Home considerations may likewise be viewed as when inpatient care is inaccessible or perilous (for example limit is constrained, and assets can't fulfill the need for human services administrations). IPC direction for home consideration ought to be followed.

- a. Self-isolate if isolation in a medical facility is not indicated or not possible
- b. Perform hand hygiene frequently, using an alcohol-based hand rub if hands are not visibly dirty or soap and water when hands are visibly dirty;
- c. Keep a distance of at least 1 m from other people;
- d. Wear a medical mask as much as possible; the mask should be changed at least once daily.
- e. Avoid contaminating surfaces with saliva, phlegm, or respiratory secretions.
- f. Improve airflow and ventilation in their living space by opening windows and doors as much as possible.
- g. Avoid unnecessary, direct contact with animals.
- h. Don't travel when you are sick. Make sure you are healthy before traveling. If you are not, seek medical care, immediately.
- i. Don't take medicines without prescription.
- j. Eating normal antibiotics doesn't help in 2019 n-CoV infection.
- k. As always, prevention is better than cure.

How to Prevent Coronavirus infection transmission?

In case anyone diagnosed with Coronavirus, healthcare provider will decide whether need to be hospitalized or can remain at home. Everyone

should adhere to the following steps before you can return to your normal activities:

- i. Don't leave home unless to get medical care – Restrict your activities just to your home and avoid visiting work, school, or any other public areas.
- ii. Keep yourself away from other members of the family, including any pets – It's better to keep yourself restricted to a separate room and also use a separate bathroom, if possible.
- iii. Call before visiting your doctor – If you have a medical appointment, it's best to let the doctor know from beforehand so that they can take proper steps to keep other people from being infected.
- iv. Wear a mask – Whenever you're outside in a public place, you should always wear a facemask.
- v. Cover your mouth while coughing and sneezing – You should also cover your mouth with a tissue while coughing or sneezing.
- vi. Clean your hands thoroughly – Immediately after you cough or sneeze, and also at other times, wash your hands for at least 20 seconds with soap water or use an alcohol-based sanitiser. The sanitiser should contain at least 60-95% of alcohol.
- vii. Avoid sharing personal items – It's important that you keep away the personal items you use on a daily basis such as drinking glasses, dishes, and towels away from your family and pets.
- viii. Clean surfaces and objects prone to high touch – Some of the common surfaces or objects such as doorknobs and tabletops that may be accessed by everyone should be cleaned to avoid the transfer of the virus.
- ix. Monitor symptoms – In case you feel that the symptoms are getting worse, you should call your healthcare provider and get checked.
- x. You should remain in home isolation until your healthcare provider feels that the risks of secondary transmission are low⁶.

Stay healthy, and take care!**References -**

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Role in Prevention of Corona Virus Infection

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Abstract -

Corona virus disease 2019 (COVID-19) is an infectious disease caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). It was first identified in December 2019 in Wuhan, China, and has since spread globally, resulting in an ongoing pandemic. As of 10 May 2020, more than 4.02 million cases have been reported across 187 countries and territories, resulting in more than 279,000 deaths. More than 1.37 million people have recovered. Common symptoms include fever, cough, fatigue, shortness of breath, and loss of smell and taste. While the majority of cases result in mild symptoms, some progress to acute respiratory distress syndrome (ARDS), multi-organ failure, septic shock, and blood clots. The time from exposure to onset of symptoms is typically around five days but may range from two to fourteen days.

Introduction -

The virus is primarily spread between people during close contact, most often via small droplets produced by coughing, sneezing, and talking. The droplets usually fall to the ground or onto surfaces rather than travelling through air over long distances. Less commonly, people may also become infected by touching a contaminated surface and then touching their face. It is most contagious during the first three days after the onset of symptoms, although spread may be possible before symptoms appear and in later stages of the disease. The standard method of diagnosis is by real-time reverse transcription polymerase chain reaction (rRT-PCR) from a nasopharyngeal swab. Chest CT imaging may also be helpful for diagnosis in individuals where there is a high suspicion of infection based on symptoms and risk factors; however, guidelines do not recommend using it for routine screening.

Recommended measures to prevent infection

include frequent hand washing, maintaining physical distance from others (especially from those with symptoms), quarantine, covering coughs, and keeping unwashed hands away from the face. In addition, the use of a face covering is recommended for those who suspect they have the virus and their caregivers. Recommendations for face covering use by the general public vary, with some authorities recommending, some recommending against, and others requiring their use. There is limited evidence for or against the use of masks (medical or other) in healthy individuals in the wider community.

According to the World Health Organization, there are no available vaccines nor specific antiviral treatments for COVID-19. On 1 May 2020, the United States gave Emergency Use Authorization to the antiviral remdesivir for people hospitalized with severe COVID-19. Management involves the treatment of symptoms, supportive care, isolation, and measures. The World Health Organization (WHO) declared the COVID-19 outbreak a Public Health Emergency of International Concern (PHEIC) on 30 January 2020 and a pandemic on 11 March 2020. Local transmission of the disease has occurred in most countries across all six WHO regions. It is important to note that no fortune teller, astrologer or architect has predicted the corona at the Indian or international level. The important task in the future is to rid the masses of those who propagate and spread unscientific things. Corona urges us to take a positive view of science and research. The name 'Corona' is now well known. Certainly not in a good sense. Today, the whole world is shocked by the disease 'Covid-19' caused by the corona virus. He has never crossed the boundaries of caste, religion, gender, country. I also put 'direction' in it. In all directions, the Corona has penetrated villages and homes. The architect and the person who built the house on his advice are no exception. I don't think anyone would be

upset about that. It should be noted that no fortune teller, astrologer or architect has predicted the corona at the Indian or international level. I say this internationally because the so-called world astrologer Nostradamus or Vedokta astrologer is likely to publish something in the future, so I make it clear at the outset. Evidence of Shlokas, Vedas, Puranas is also likely to be given for this prophecy. A corona is a natural disaster that has hit the entire world. Although it originated in China, it is not officially recognized as a Chinese product. It is irresponsible to make any statement without evidence, so China has not yet been officially reprimanded.

Signs and symptoms –

Fever is the most common symptom, although some older people and those with other health problems experience fever later in the disease. In one study, 44% of people had fever when they presented to the hospital, while 89% went on to develop fever at some point during their hospitalization. Other common symptoms include cough, loss of appetite, fatigue, shortness of breath, sputum production, and muscle and joint pains. Symptoms such as nausea, vomiting, and diarrhea have been observed in varying percentages. Less common symptoms include sneezing, runny nose, or sore throat. Some cases in China initially presented with only chest tightness and palpitations. A decreased sense of smell or disturbances in taste may occur. Loss was a presenting symptom in 30% of confirmed cases in South Korea. As is common with infections, there is a delay between the moment a person is first infected and the time he or she develops symptoms. This is called the incubation period. The incubation period for COVID 19 is typically five to six days but may range from two to 14 days, although 97.5% of people who develop symptoms will do so within 11.5 days of infection.

Prevention -

Preventive measures to reduce the chances of infection include staying at home, avoiding crowded places, keeping distance from others, washing hands with soap and water often and for at least 20 seconds, practicing good respiratory hygiene, and avoiding touching the eyes, nose, or mouth with unwashed hands. The CDC recommends covering the mouth and nose with a

tissue when coughing or sneezing and recommends using the inside of the elbow if no tissue is available. Proper hand hygiene after any cough or sneeze is encouraged. The CDC has recommended the use of cloth face coverings in public settings where other social distancing measures are difficult to maintain, in part to limit transmission by asymptomatic individuals. The U.S. National Institutes of Health guidelines do not recommend any medication for prevention of COVID 19, before or after exposure to the SARS-CoV-2 virus, outside of the setting of a clinical trial. Social distancing strategies aim to reduce contact of infected persons with large groups by closing schools and workplaces, restricting travel, and cancelling large public gatherings. Distancing guidelines also include that people stay at least 6 feet (1.8 m) apart. There is no medication known to be effective at preventing COVID 19. After the implementation of social distancing and stay-at-home orders, many regions have been able to sustain an effective transmission rate (“Rt”) of less than one, meaning the disease is in remission in those areas.

As a vaccine is not expected until 2021 at the earliest, a key part of managing COVID 19 is trying to decrease and delay the epidemic peak, known as “flattening the curve”. This is done by slowing the infection rate to decrease the risk of health services being overwhelmed, allowing for better treatment of current cases, and delaying additional cases until effective treatments or a vaccine become available. According to the WHO, the use of masks is recommended only if a person is coughing or sneezing or when one is taking care of someone with a suspected infection. For the European Centre for Disease Prevention and Control (ECDC) face masks could be considered especially when visiting busy closed spaces but only as a complementary measure. Several countries have recommended that healthy individuals wear face masks or cloth face coverings (like scarves or bandanas) at least in certain public settings, including China, Hong Kong, Spain, Italy (Lombardy region), Russia, and the United States.

Those diagnosed with COVID 19 or who believe they may be infected are advised by the CDC to stay home except to get medical care, call ahead before visiting a healthcare provider, wear a face mask before entering the healthcare provider’s

office and when in any room or vehicle with another person, cover coughs and sneezes with a tissue, regularly wash hands with soap and water and avoid sharing personal household items. The CDC also recommends that individuals wash hands often with soap and water for at least 20 seconds, especially after going to the toilet or when hands are visibly dirty, before eating and after blowing one's nose, coughing or sneezing. It further recommends using an alcohol-based hand sanitizer with at least 60% alcohol, but only when soap and water are not readily available.

Here are the measures you need to take to keep the virus at time:

1. Avoid close contact with people who are sick. Maintain at least three feet distance between yourself and anyone who is coughing or sneezing.
2. Avoid touching your eyes, nose, and mouth.
3. Stay home when you are sick.
4. Cover your cough or sneeze with a tissue, then dispose of the tissue safely.
5. Clean and disinfect frequently-touched objects and surfaces using a regular household cleaning spray or wipe.
6. Wearing a mask is not necessary unless you are taking care of an infected person. The Centers for Disease Control (CDC) does recommend that only infected people wear masks to prevent the spread of the virus.
7. Wash your hands often with soap and water for at least 20 seconds, especially after going to the bathroom, before eating, and after blowing your nose, coughing, or sneezing.
8. If soap and water are not readily available, use an alcohol-based hand sanitiser with at least 60% alcohol. Always wash hands with soap and water when hands are visibly dirty.
9. If you have a fever, cough and difficulty breathing, seek medical attention immediately.
10. Keep in mind the travel advisory set out by the Ministry of Health and Welfare.

Result -

- 1) Corona in our country. In the new world a

virus that will linger in our minds for a long time Two things that are very important for it are good health and safe perfume. Now your fight is with Corona for at least a year. 'LOCKDOWN' Whether or not you want to go to the critical stage of corona disease, then the following suggestions are very important because if you do not want the infection to be critical, then two things are important immunity and viral load.

- 2) Corona spreads through the respiratory tract, just as the surface is spread through body clothes, hand objects, mobiles, watches. There is seeing this, I felt it was my responsibility to write this article as a doctor.
- 3) The first point is better health Eating on time for good health, like eight hours of good sleep, one hour of light exercise at home Keep yourself happy with yoga, rope jumping, spot jogging, pranayama, kapalbhati, anulom-vilom (there are many videos available for this on YouTube). Don't let the stress of studying put pressure on the children at home.
- 4) Second issue 'Social Distance'. Today we will understand the meaning of this word which is not new to anyone. There should be at least one meter distance between two persons. Afterwards, when I went to a grocery store to buy groceries, there was a very disturbing picture. The shopkeeper and his three colleagues wore masks around their necks for the show without putting a mask on their faces. There was a bottle of sterlium .Some people didn't even bother to wear a mask .Some even took a packet of chips and started eating. At that moment, the shop seemed to be a hot spot for me. What did I have to do in such a situation??? Get out only if the first thing is necessary.

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Personal Role in Prevention of Corona Virus

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Introduction -

What is COVID-19?

The corona virus is a family of viruses that can cause a range of illnesses in humans including common cold and more severe forms like SARS and MERS which are life-threatening. The virus is named after its shape which takes the form of a crown with protrusions around it and hence is known as corona virus.

COVID-19 is a disease caused by the "novel corona virus". Common symptoms are: Fever Drycough Breathing difficulty some patients also have aches and pains, nasal congestion, runny nose, sore throat or diarrhoea about 80% of confirmed cases recover from the disease without any serious complications. However, one out of every six people who gets COVID-19 can become seriously ill* and develop difficulty in breathing. In more severe cases, infection can cause severe pneumonia and other complications which can be treated only at higher level facilities (District Hospitals and above). In a few cases it may even cause death.

Keywords - COVID-19, corona virus disease, health communication, prevention, intervention

How does COVID-19 spread?

COVID-19 spreads mainly by droplets produced as a result of coughing or sneezing of a COVID-19 infected person. This can happen in two ways: § Direct close contact: one can get the infection by being in close contact with COVID-19 patients (within one Metre of the infected person), especially if they do not cover their face when coughing or sneezing. Indirect contact: the droplets survive on surfaces and clothes for many days. Therefore, touching any such infected surface or cloth and then touching one's mouth, nose or eyes can transmit the disease. The incubation period of COVID 19 (time between getting the infection and showing symptoms) is 1 to 14 days

some people with the infection, but without any serious symptoms can also spread the disease.

Your role in early detection and referral as a community worker you may be asked to prepare a line list of all people who have travelled to other countries or other states inside India in last 14 days: Share their names with your Medical Officer at PHC but not with others teach them Home Quarantine for next 14 days. Tell them to monitor themselves for symptoms of COVID-19. Tell them to inform you if symptoms develop and call the COVID 19 Helpline Instructions for the person being Home Quarantined Stay in a separate room at home, if possible with an attached/separate toilet. Try to maintain a distance of at least 1 meter from others Wear a mask at all times. If masks are not available, take a clean cotton cloth, fold it into a double layer and tie it on your face to cover your nose and mouth. Use separate dishes, towels, bedding etc. which should be cleaned separately. The surfaces such as floor, table tops, chairs, door handles etc. should be cleaned at least once a day. Make sure that only one assigned family member is the caretaker Instructions for the caretaker of the Home Quarantined person: Keep a distance of one meter when entering the room. §Wear a mask or cover your face with double layered cotton cloth. Wash your hands after coming out of the room. How to use masks or cloth covering the nose and mouth. Wash your hands before putting on the mask. Make sure that it covers both mouth and nose and is not loose. Do not touch the mask from the front, touch only from the sides. Make sure to wash your hands after changing the mask. Change the mask every 6-8 hours or when it becomes moist. If using disposable masks, have a dustbin with cover and a plastic bag lining to throw the masks in. If using cloth masks, wash them at least daily

How to take care of yourself and carry on with your duties as a frontline worker?

Take all preventive measures that you are talking about in the community such as keeping safe distance, washing hands frequently including before and after home visits. Carry your own soap if necessary. If you are visiting or accompanying a suspected case to any health facility, make sure to cover both your mouth and nose with folded cloth or mask. If you are conducting community meetings or supporting outreach sessions the groups should not be larger than 10-12 people.

Maintaining safe distances for those living in crowded areas or the homeless is going to be difficult. Even then you should inform them about preventive measures and support them as required. Self-monitor for signs of illness and report to the Medical Officer, immediately if any symptoms develop. Ensure that you continue to undertake tasks related to care of pregnant women, newborns and sick children, Post Natal Care, Breastfeeding and Nutritional Counseling, TB and NCD patient follow up while taking preventive measures. Remember older people are at higher risk, so take special care to visit homes of elderly people. Continue to pay special attention to the marginalized, as is your routine practice. Also as the people's trusted health worker, try to reassure them that while those with symptoms and high risk need close attention, for others, prevention measures will decrease the risk of getting the disease.

National Health Mission -

Ministry of Health & Family Welfare
Government of India Myths vs. reality for COVID-19

Myths vs. reality for COVID-19

As COVID-19 is a new condition, there are many common myths

Sr.No.	Myths	Facts
1	The corona virus can be transmitted through mosquitoes.	The corona virus CANNOT be transmitted through mosquito bites
2	Everyone should wear a mask	People who should wear a mask are: <ul style="list-style-type: none"> • Those having symptom of fever, cough etc. • Healthcare workers in facilities caring for ill people. • The assigned care taker of a home quarantined person. • Even those wearing masks should wash their hands frequently
3	Only people with symptoms of COVID-19 can spread the disease	Even people with the COVID-19 infection but no symptoms can spread the disease.
4	Eating garlic and drinking alcohol can prevent COVID 19	Eating garlic and drinking alcohol DOES NOT prevent COVID 19

Advice on the safe use of alcohol-based hand sanitizers

- To protect yourself and others against COVID-19, clean your hands frequently and thoroughly. Use alcohol-based hand sanitizer or wash your hands with soap and water. If you use an alcohol-based hand sanitizer, make sure you use and store it carefully. Keep alcohol-based hand sanitizers out of children's reach. Teach them how to apply the sanitizer and monitor its use.
- Apply a coin-sized amount on your hands. There is no need to use a large amount of the product.
- Avoid touching your eyes, mouth and nose immediately after using an alcohol-based hand sanitizer, as it can cause irritation.
- Hand sanitizers recommended to protect against COVID-19 are alcohol-based and therefore can be flammable. Do not use before handling fire or cooking.
- Under no circumstance, drink or let children swallow an alcohol-based hand sanitizer. It can be poisonous.
- Remember that washing your hands with soap and water is also effective against COVID-19.

The role as a responsible citizen is to inform the citizens that the government has created a Arogya setu app and to ask them to download the app.

What is Aarogya Setu App?

Aarogya Setu App is developed by the National Informatics Centre which is a part of the Ministry of Electronics and Information Technology (MeitY), Government of India. It is a Bluetooth-based COVID-19 tracker launched by the Government of India. The aim of the Aarogya Setu App is to augment the initiatives of the Government of India, particularly the Department of Health, in proactively reaching out to and informing the users of the app regarding the risks, best practices and relevant advisories pertaining to the containment of COVID-19.

Benefits of using Arogya Setu App -

Aarogya Setu App is available on both the platforms- Android and iOS. The app is available in 11 languages - English, Hindi, Telugu, Kannada, Malayalam, Tamil, Punjabi, Bengali, Oriya, Gujarati,

and Marathi. The app is expected to be available in more Indian languages soon. The benefits of using Aarogya Setu App are mentioned below:

1. The Aarogya Setu App works on Bluetooth-based technology and tries to determine risk based on the user's location.
2. The risk factor is also based on the data available for that particular location.
3. It keeps the user informed in case he/she has crossed paths with the positive COVID-19 case within 6-feet proximity.
4. The app recommends several measures to the user such as Self Assessment Test, Social distancing, do's and don'ts, amid COVID-19.
5. The Aarogya Setu App also informs the user about the precautionary measures, and how to maintain social distancing in the times of global pandemic.
6. As per the statement by PMO, the app could also be an e-pass facilitating travel from one place to another.
7. In case, a user is at high risk, the app will advise him/her to go for a test at a nearby testing centre and call the toll-free number 1075 immediately.
8. The app is also equipped with a chatbot that answers all the basic questions on corona virus disease or COVID-19.
9. The users can also find the helpline numbers for each state in India.

Stay active at home -

Physical activity benefits both the body and mind. Healthy adults should aim for at least 30

minutes of daily physical activity and at least 1 hour for healthy kids (5-17 years).

Follow these tips for staying physically active during self-isolation or quarantine:

- Plan time for physical activity in your day
- Take regular breaks from sitting by standing up and stretching or going for a quick walk if permitted
- Follow an online exercise class
- Think outside the box: activities like dancing, playing active videogames, cleaning the house or playing with your kids all count as physical activity!

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Impact of COVID-19 Lockdowns on Environment and Climate

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Abstract -

COVID-19, a dreadful disease caused by a SARS-CoV-2 virus is shaking the entire world infecting millions of people and killing lakhs of people across the globe. Quarantine, social distancing, travel bans and lockdown measures are followed by almost all the countries to control this pandemic. These measures have a significant impact on environment and climate due to shutting down of all forms of transport and industries, which ultimately resulted in the decline of air, water, noise pollution etc. A marked decline in the levels of Carbon monoxide, Sulfer dioxide, Nitrous oxide, PM2.5 levels etc., as is evident from the satellite observations have proven this. The present paper mainly deals with the impact of COVID-19 lockdowns on air, water and noise pollution.

Key Words - COVID-19, social distancing, lockdown, environment, air pollution, water pollution, noise pollution.

Introduction -

COVID-19 & SARS-CoV-2 -

COVID 19, Corona Virus Disease-19, a pandemic caused by SARS-COV-2 virus first detected in Wuhan city, Hubei province of China¹, has rapidly spread to 215 countries or areas or territories is shaking the entire globe with its wide spread infection effecting 3, 557,235 people across the globe with a confirmed deaths of 245, 150 as of 6th May 2020². China reported about this new infectious disease to WHO (World Health Organization) on 31st December 2019. As the disease is caused by a corona virus and as this virus appeared in the year 2019, WHO named this virus temporarily as 2019 novel corona virus (2019-nCoV) and the disease caused by this virus is named as COVID 19, i.e. Corona Virus Disease 2019³. The virus is reported to be spread from some Bat species which are natural reservoirs of this corona

virus^{4,5}.

The various modes of viral transmission includes- droplets arising from the coughs, sneezes, exhales of infected persons, coming into contact with the infected surfaces or with the infected persons^{6, 7, 8, 9}. Most of the infected individual's exhibit mild to moderate symptoms (flu like symptoms) and only few individuals (people suffering from chronic lung disease, Diabetes, Chronic heart disease, Immune suppressed conditions, aging, and alcoholism) suffer from severe symptoms such as pneumonia and ARDS (Acute Respiratory Distress Syndrome leading to respiratory failure, multi organ failure and finally to death^{10,11}. Considering the severity of the infection and rapid spread of the virus causing life threatening symptoms, governments of almost all the countries imposed lockdown measures to control to spread of the virus.

Measures to control COVID 19 infection

The following measures have to be followed to control infection caused by this novel corona virus¹².

1. One should avoid close contacts with individuals who are infected.
2. All should avoid touching nose, eyes and mouth as these are the entry points of virus.
3. Make a habit of washing hands with a soap or sanitizer as often as possible
4. At least maintain 1 meter (3 feet) distance between you and others to avoid infection spread from aerosols (droplets arising from coughing and sneezing activities).
5. It is always advisable to avoid going to crowded places where you found difficult to maintain social distance.
6. Be at home isolation when you observe that you are suffering from flu like

- symptoms and seek medical attention when you suffer from fever, cough and difficulty in breathing.
7. Always cover your nose and mouth with a clean mask
 8. Frequently clean and disinfect the objects that you touch everyday like laptops, phones.
 9. Get the latest information and updates from the trusted sites such as WHO.

Social Distancing and Lockdown -

In addition to the above mentioned measures social isolation or social distancing helps allot in controlling the virus spread. Social distancing includes the measures adapted to slowdown or stop the spread of viral infection¹³. This can be done by maintaining enough distance between two persons to avoid chances of spread of infection through aerosols. This usually contains 6 feet or more. The government also has imposed several measures to control the virus spread by closing all educational institutions, shopping malls, Cinema theatres etc. All the employees were instructed to perform work from home. All transportation services were also shutdown. A complete lockdown strategy was followed by almost all the countries to control the virus spread by breaking the chain of new corona virus infections.

Impact of lockdown measures -

An improvement in air quality was reported in many countries due to implementation of lockdown measures against coronavirus pandemic. The restrictions imposed led to a great economic fall all over the globe but some of the most polluted cities of the world experienced cleaner air which they won't imagine to happen. This is because of shutting down of factories, Industries and transportation services.

Impact of COVID-19 lockdown on air pollution

The air pollution, one of the leading causes of worldwide deaths significantly reduced after COVID-19 pandemic. Figure 1 shows the world wide deaths from air pollution.



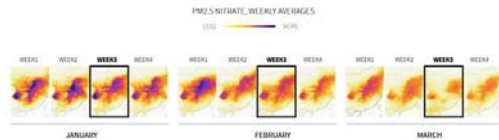
Figure 1 worldwide deaths from air pollution

Source: [HYPERLINK "<https://www.weforum.org/agenda/2020/04/the-deadly-link-between-covid-19-and-air-pollution/>"]

COVID-19 pandemic which has shaken the entire globe also caused significant impact on the environment¹⁴. The restrictions imposed on travel mainly contributed to a significant drop in air pollution¹⁵. Some of the environmental changes that were observed during lockdown period are as follows.

The data obtained from NASA's Global Modeling and Data Assimilation team, clearly showed how certain pollutants levels altered drastically after implementation of lockdown measures. The information on aerosols was obtained from records of satellite observations and NASA's model then provides concentrations of these pollutants closer to the surface of the earth.

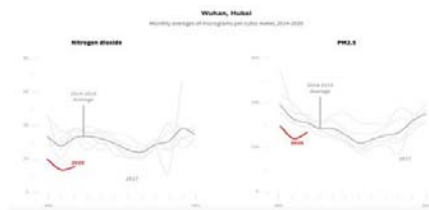
In Hubei province of China, the first city to report the COVID-19 pandemic, a significant reduction in the levels of PM2.5 nitrate were observed after implementation of lockdown measures that included travel restrictions. PM2.5 are tiny particles which contains nitrate as one of the components. These particles make up 3% of the diameter of human hair and hence can easily penetrate into deeper regions of lungs and can then enter the bloodstream. This can finally lead to chronic diseases such as heart disease, strokes or cancer. Human activities like burning fuel and diesel emit nitrogen compounds which are sources of these nitrate aerosols. Power plants, vehicle exhausts, waste water treatment plants are some of the primary sources of nitrogen dioxide. Figure 2 shows the PM2.5 Nitrate, weekly averages data in China. (<https://www.weforum.org/agenda/2020/04/coronavirus-covid19-air-pollution-environment-nature-lockdown/>)



*Source- Image Reuters Graphics

Figure 2: PM_{2.5} Nitrate, weekly averages data in China

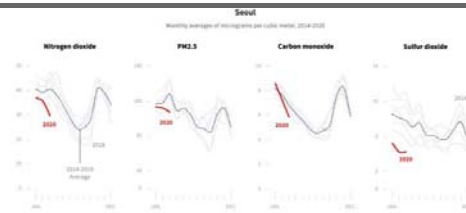
A 25% reduction in carbon emissions was also observed in China due to lockdown measures which saved at least 77,000 lives according to an estimate^{16,17}. COVID-19 pandemic has led to the significant reduction in air pollution. Prior to the pandemic also researchers advised that global warming, air and water pollutions can be decreased with reduced economic activity^{18,19,20}. There is a positive correlation between air pollution and COVID-19. A cleaner air can help to reduce the COVID-19 risks²¹. Figure 3 shows the monthly averages of Nitrogen dioxide and PM_{2.5} levels between 2014-2020 in Wuhan, Hubei province, China in micrograms per cubic meter.(<https://www.weforum.org/agenda/2020/04/coronavirus-covid19-air-pollution-environment-nature-lockdown/>)



*Source- Image Reuters Graphics

Figure 3 Monthly averages of pollutants between 2014-2020 in Wuhan, Hubei province

Large increases in COVID-19 cases were also reported in South Korea in early March. Though there were no major restrictions imposed by the government on public, daily activity changes could have contributed to the significant reduction in the pollutant levels. Figure 4 shows the monthly averages of some pollutants (Nitrogen dioxide, PM_{2.5}, Carbon monoxide, Sulfur dioxide) between 2014 -2020 in micrograms per cubic meter, in Seoul. (<https://www.weforum.org/agenda/2020/04/coronavirus-covid19-air-pollution-environment-nature-lockdown/>)



*Source- Image Reuters Graphics

Figure 4 Monthly averages of pollutants between 2014-2020 in Seoul, South Korea

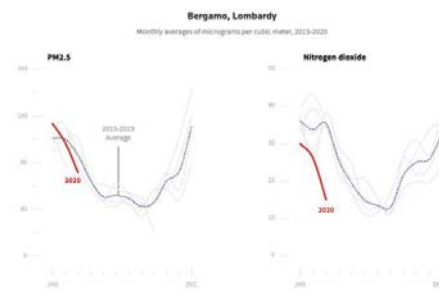
Italy also introduced a nationwide lockdown on March 9. European space agency observed a marked decline in the levels of nitrous oxide emissions in the Po Valley region in northern Italy between 1st Jan and 11th Mar 2020, due to restrictions on travel and as well on factories²². Figure 5 shows the PM_{2.5} weekly averages in Italy after implantation of lockdown measures. (<https://www.weforum.org/agenda/2020/04/coronavirus-covid19-air-pollution-environment-nature-lockdown/>)



*Source- Image Reuters Graphics

Figure 5: PM_{2.5} Nitrate, weekly averages data in Italy

A significant improvement in air quality was observed in Bergamo, one of the provinces which are severely affected by the virus. Figure 6 shows the monthly averages of PM_{2.5} and Nitrogen dioxide between 2015 -2020 in micrograms per cubic meter, in Bergamo, Lombardy.(<https://www.weforum.org/agenda/2020/04/coronavirus-covid19-air-pollution-environment-nature-lockdown/>)



*Source- Image Reuters Graphics

Figure 6 Monthly averages of PM_{2.5} and Nitrogen dioxide between 2015 -2020 in micrograms per cubic meter, in Bergamo, Lombardy.

New Delhi and other big cities in the north are highly polluted and are fully covered by a blanket of smog in every winter. It's mainly due to the activity of farmers who burn crop residue during that period. The quality of air becomes somewhat

clear in spring. COVID-19 pandemic contributed a significant decline in pollutants due to implementation of national wide lockdown measures. India, the second most populous country with its 1.3 billion population remained in their homes from March 25th 2020, which could be a major factor²³. A downward trend observed in overall PM_{2.5} indicates the positive impact of lockdown in the improvement of air quality. Figure 7 shows the monthly averages of PM_{2.5} between 2015 - 2019 in micrograms per cubic meter, in Lucknow, Uttar Pradesh and U.S. embassy, New Delhi. (<https://www.weforum.org/agenda/2020/04/coronavirus-covid19-air-pollution-environment-nature-lockdown/>)

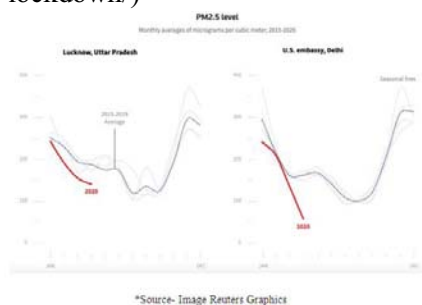


Figure 7 Monthly averages of PM_{2.5} between 2015 - 2019 in micrograms per cubic meter, in Lucknow, Uttar Pradesh and U.S. embassy, New Delhi.

Impact on water quality -

The clear waters in Venice experienced greater water flow and visibility of fish²⁴. The reduction in water pollution due to lockdown measures resulted in the appearance of Ganges dolphins (South Asian River Dolphins) at various Ganga Ghats of Kolkata after a period of 30 years which are thought to be critically endangered. The holy Ganga water not fit for drinking due to heavy pollution became clear and as reported by the Uttarakhand Pollution Control Board by testing water from Har-ki-Pauri in Haridwar certified that this water is fit for consumption after chlorination treatment. The lockdown resulted industrial closure stopped the dumping of industrial wastes into Ganges thus bringing a significant change in the quality of water²⁵. According to the analysis by Delhi Pollution Control Board, lockdown has significantly improved the quality of Yamuna water flowing along New Delhi^{26,27}.

Impact on Noise pollution -

The COVID-19 lockdown also significantly lowered noise pollution due to slowdown in traffic. Certain animals, birds and whales are benefiting

from a quieter environment. Noise pollution also affects millions of people across the globe as per the World Health Organization (WHO). Birds are the biggest beneficiaries. In general birds send signals in the form of songs which is a means of survival for them. Birds will find their mate, defend from their predators by their signal communication. But the human made noise, anthropogenic noise is a biggest threat to birds signalling systems. Birds sing louder if their surrounding environments are noisy. Usually birds sing quietly in the early morning hours of the weekends due to less traffic. A study by the Max Planck Institute suggested that chronic traffic noise has a negative impact on embryo mortality and growth in zebra finches. Lower stress hormone levels are observed in the faeces of right whales, a species of baleen whale that found in the waters along the US-Canadian coast due to reduced noise levels from shipping traffic due to lockdown measures²⁸.

Conclusion -

Our mother nature is providing us with everything we need. But, we, the human beings with our thankless attitude and activities are causing much harm to our mother nature. We are least bother towards preserving our natural resources and towards sustainable development. The Covid-19 lockdown taught us good lessons regarding the importance of nature in our day to day life. So at least from now onwards we all should love and take enough care to protect our nature.

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Impact of lockdown due to COVID-19 on Environment, Behaviour of Animals and Human Psychology

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Abstract -

The novel coronavirus is pandemic and spreading like a fire all over the globe. The SARS-CoV 2 virus is the etiological factor for the COVID-19. It has been first detected at Institute of Virology Laboratory at Wuhan, China. It is known that this virus gets develop in bats and pangolins. Although it is also known that the bats are the source of spreading virus. The COVID-19 has already affected 170 countries around the world. The mortality rate is increasing day by day. No antiviral or vaccine is available but the use of some drugs gives positive symptom relieving results. This creates epidemic anxiety and panic condition in general public sector. The frontline warriors i.e. health care workers, nurses and police personnel are also being infected day by day. This generates the fear in patients and population. Not only the human psychology is threatened but the researchers have found unusual behaviour of animals. In spite of all this, the lockdown due to COVID-19 has resulted positive impact on mother earth. This paper includes the overall result of Lockdown due to COVID-19 on earth, animals and human psychology.

Introduction -

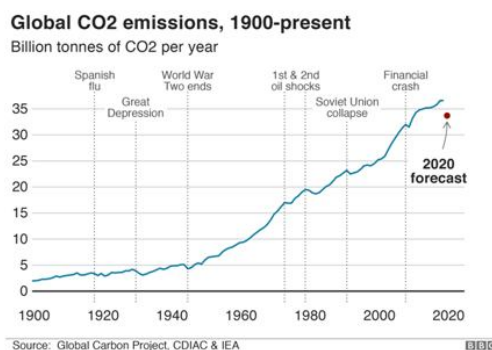
The novel coronavirus COVID-19 has deeply influenced the world by its commination. The increasing death ratio has made the world to be self-isolated at homes. This has drastically transformed not only human life but has affected the wildlife also. Due to lockdown of few months the environment started to recover itself as human species is not interrupting in the process. The impact of lockdown has made the animals to glimpse the developed world.

Impact of COVID 19 on Environment -

Pandemic coronavirus has made a drastic impact on nature and environment in few months

over the globe. The COVID 19 has made the world to get self-isolated as this is only way to get over it. By the total self-isolation program followed by various countries, there is a massive fall in concentration of carbon dioxide in atmosphere. Even falling of carbon dioxide concentration in such a gigantic form, the world won't stabilize the problem of global warming until the emission reaches net zero. But it may surely heal the nature by itself.

The Spanish Flu killed millions of lives in past century. From that era, the CO₂ emission has increased enormously. The world has transformed during this period. This led to seeping of CO₂ in atmosphere since 1850s. There are many events through which the CO₂ emissions have felled dramatically over period of time.



After World War II, the CO₂ concentration in atmosphere drop to around 800 million tons. Although this fall is smaller than the oil crisis that happened during 1980s. In 1980s due to global recession followed by oil crisis there was a massive fall of carbon dioxide which was around 1 billion tons.

But, the pandemic coronavirus 2020 dwarves all these events in just few months. The total lockdown effect across whole world make all the industries and companies' shutdown which led to fall in demand of energy globally. The International Energy Agency stated in a report that due to

pandemic coronavirus 2020 the world will use 6 per cent less energy this year which will contribute to large fall in CO₂. After performing several analysis and data interpretation, it resulted that this year near about 4-8 % of fall of CO₂ concentration would be found which will be somewhere between 2 to 3 billions of warming gas. This is around six to seven times larger fall during global recession. While lockdown, many cities over world has observed fall of carbon dioxide, for example in Paris there is 72 per cent fall of CO₂ during lockdown while in New York it is about 10 per cent.

In India, due to full lockdown till mid-April, we have experienced about an average 25 per cent decline in energy demand per week. The International Energy Agency (IEA) states that, the energy demand would fall to 6 per cent in 2020. India has observed about approximate 5 per cent decline in carbon dioxide.

As due to such drastic fall of warming gas in atmosphere the ozone layer started to heal itself. The largest hole in ozone layer over the Arctic has been closed and healed up completely which is a boost to environment. Although Copernicus Atmosphere Monitoring Service (CAMS) has tweeted that this healing is unrelated to Coronavirus lockdown. But though many scientist believe that due to total shutdown the environment is stabilizing itself. Many rivers and ponds are now cleaned and fresh air circulation is on high. The Air Quality Index is also on low rate which has increased the oxygen concentration in atmosphere.

Impact of COVID-19 on Animals and their Behaviours -

The spread of coronavirus among humans is common headline nowadays. Recent study has revealed that the COVID-19 disease is a zoonotic disease i.e. it has been transmitted from animals to humans. But now it can state that the COVID-19 disease has same effect on humans and animals. It had already known that animals had been infecting humans over the period of time. But it is for the first time in history that a human has infected an animal.

It is known that SARS-CoV-2 virus (etiological factor of COVID-19) is spread by bats and pangolins and it gets matured in them. A news stated that a tiger at Bronx Zoological Park has been tested positive for coronavirus. The tiger along

with six big cats were infected by the zoo keeper who was asymptotically corona positive. This threatens the human who have pets in their houses. The coronavirus is now infecting to our companion animals like dogs and cats. A 17-year dog tested positive for a week in month of March and later died in Hong Kong. Even two pet cats tested positive in New York. The statement is given by Centres of Disease Control and Prevention that this infection is spread from pet owners to their pets. The infection is now transmitted to cows, chickens and pigs. In an experiment, the infected animals were kept in cage along with two non-infected animals. It was found that the transmission of virus was from cat to cat more rapidly. Along with it, the dogs which were positive later found to be negative and had generated an immune response against virus.

As the lockdown is only way to keep ourselves safe and healthy the humans now are self-isolated in homes. As the part of lockdown all zoos are closed. It has been observed that most intelligent and social animals like gorillas, otters and meerkats are missing the attention of humans and there is sudden drastic change observed in their behaviour. The humans by self-isolation at homes made the wild animals roam in urban areas. In Northern India, a herd of deer was roaming on streets of Haridwar during COVID-19 lockdown and was captured in CCTV camera. Similar incident occurred in the Centre of Barcelona Spain were a wild boar has been spotted. In Wales, mountain goats are migrating to streets of Llandudno.

Same incidents have been occurred in India. The lions of Gir forest were found to be roaming in urban areas. The wild sambar and deer had been spotted on Chandigarh roads, chital in Dehradun city and Nilgai in Noida.

The COVID-19 has led to drastic change in animals' behaviour as the migration has been observed. During lockdown, development of industries and afforestation is stopped and the forests and natural habitat is increasing day by day. Then it's a topic of interest for researchers of Animal Behaviour that why wild animals are migrating to urban areas and leaving their natural habitat.

There many such cases observed and are listed in the figure.



Mountain goats roaming on streets of Landudno Japan A goat crossing street in Nara, Japan



Jackals seen on grass in Hayarkon Park, Israel Wild horses grazing in field of stadium in Srinagar, Jammu & Kashmir
Sea Lion seen on sidewalk in Argentina Grey Langurs playing on roads of Ahmedabad, India

Impact on Human Psychology -

The COVID-19 has already crossed the line of status of pandemic. For this, World Health Organization (WHO) has guided to manage the problem of biomedical and psychological issue develop in population. However, the first measure is to treat the patients by medical action, but is also important to give attention on psychological mindset of individual. World Health Organization (WHO) has issued guidelines for emergency psychological crisis intervention which contains the direct intervention to patients and indirect intervention to relatives, caregivers and health care professionals.

Psychology plays an important role in treatment of patients. The medications can heal and repair our body defects but if the patient lack will power then it makes difficult to recover the patients from disease. The patients may have a deep psychological influence as he is being isolated for couple of days for treatment. Although there is no assurity of being recovered. Many psychologists say that if the psychology is maintained then the patient obviously recovers and heals himself.

As it was first observed in China, all the international and national universities had organized the online counselling programs and services for public which would guide them. The government is not only focusing on treatment of infected but also attending the psychopathological issues developed in patients and general public sector. It

is observed that the infected COVID-19 patients i.e. confirmed and suspected patients, quarantine family members and health care workers have developed much more threat of disease.

It is seen rarely that a disease has threaten human thinking. From last few weeks, newspapers, television programs and radio-stations are continuously broadcasting the stories of coronavirus pandemic. They have back to back coverage of latest death tolls and frightening statistics. It is already known that the human behaviour depends on what he observes regularly. The constant bombardment of the news and article of COVID-19 may lead to heightened anxiety and many immediate effects on mental health.

The threat of COVID-19 on psychology of human beings is increasing immensely. Because of some events of losing our kin and kith makes our moral judgements harsher and our social attitude more conservative. Besides this, the racism reports also have deep impact of psychological and social shifts.

The coronavirus COVID-19 is not only pandemic but has induced the epidemic anxiety. Nowadays we came across too many articles which not only guide us to keep ourselves healthy but also teach us how to maintain our psychology during lockdown. They suggest many tips like eat nutritious food, try yoga, meditate and count your blessings.

The psychological impact on human can limit and conserve its thinking capabilities and may create the issues listed below:

- There is the fear of losing livelihood due to isolation or marked limitation of travel to market, fitness clubs, companies, industries and tourist places.
- There lies a continual sense of insecurity forself and loved ones.
- There lies always an anxiety of leaving away from family and friends making our emotions far away.
- This creates the phobia of social gathering and coming out of home.
- There lies a fear of staying together with the person having cold and cough even though they have simple flu.
- The rule of wearing the masks and spending very short time outside home

disturbs the mind frequently.

- Psychological stress grows a panic situation when watching and reading the messages and news channel of COVID-19 updates.

The psychological impact on human beings of coronavirus is not only going in negative way but has led the human to change and renovate his life style. The work from home program has engaged man in doing official work. As seen on various news channels due to shortage of ventilators many home scientists have invented the ventilators by home accessories which costs very less as compared to the ventilator we use today. For safety of health care workers robots are utilized to carry out the activities such as counselling of patients and to serve them.

It is said “The need is key of innovation”. Even in lockdown all the educational organizations are continuing to cover out the syllabus by online mode of teaching. The students now are learning all the things from home and completing their education. Various webinars are organized on many topics and we all are in touch of each other. Now online shopping is not limited only up to clothes and electronic items. The online pharmacies deliver the medicines at home which is quite suitable for patients who are old and susceptible to COVID-19. Various Information & Technology companies have started to work from home and continuing the step toward progress.

Surely coronavirus has brought the world to knees but every coin has two sides. The innovation and development which may come during upcoming years have been come to existence now. The human has to maintain his psychology during this pandemic condition to keep himself surrounded by healthy and positive people.

Conclusion -

The COVID-19 has been declared pandemic by World Health Organization (WHO). The vaccines and antiviral drug development are going on till date. The mortality rate may be high but the

patients are recovering by the suitable treatment. The precautions should be taken and spreading can be controlled by social distancing and guidelines stated by WHO. In situation of lockdown, the human mindset is becoming conservative. The study on animal behavior is going on till now. The environment is recovering itself in suitable way for making mother earth sustainable for life. The lockdown has also positively affected human life by making himself engaged in various innovative activities. It is responsibility of every individual of nation to stand unitedly with thenation to overcome the catastrophe called “COVID-19”.

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Impact of COVID -19 Pandemic on Various Business Sectors In India

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Abstract -

Indian businesses are struggling with “tremendous uncertainty” about their future. According to the survey, COVID-19 is having a ‘deep impact’ on Indian businesses, over the coming month’s jobs are at high risk because firms are looking for some reduction in manpower. Further, it is added that already COVID-19 crisis has caused an unprecedented collapse in economic activities over the last few weeks with the number of COVID-19 cases in India, there have been 62,939 confirmed, 2,109 people have died and 19,358 people have recovered from the virus as on 10 May. This situation, clubbed with sluggish economic growth in the previous year, especially in a developing country like India, is leading to extremely volatile market conditions. Let’s understand how the coronavirus is impacting business and subsequent tax reforms in India.

Keywords - Pandemic, COVID-19, Virus, Lockdown, Impact.

Introduction -

Coronavirus (Covid-19) is a large family of viruses that causes illness. It ranges from the common cold to more severe diseases like Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS). The novel coronavirus is a new strain of the virus that has not been identified in humans so far. WHO is working closely with global experts, governments, and other health organizations to provide advice to the countries about precautionary and preventive measures? To combat COVID-19, the Indian Government extended the date of lockdown to 17th May 2020. India’s real GDP declined to its lowest in over six years. “Nationwide complete lockdown is likely to shave off at least Rs 7-8 trillion,” it said. Acute Ratings & Research Ltd earlier this month estimated that the lockdown will cost the

Indian economy almost USD 4.64 Billion (over Rs 35,000 crore) every day and the entire 21+ 15 day lockdown will result in a GDP loss of almost USD 98 billion (about Rs 7.5 lakh crore).

Gross Domestic Product (GDP) estimates for India downwards by 0.2 percentage points for the fiscal year 2020 to 4.8 per cent and by 0.5 per cent for the fiscal year 2021 to 6 per cent. Business activity in the foreign markets is slow which implies a negative impact on the topline of these companies. Sectors that would be much affected includes logistics, auto, tourism, metals, drugs, pharmaceuticals, electronic goods, MSMEs, and retail among others.

According to KPMG, the lockdown in India could have a substantial and significant impact on the economy mainly on consumption which is the biggest component of GDP. Reduction in the urban transaction can lead to a precipitous fall in the consumption of non-essential goods. It can be severe if disruption causes by the 21 + 15 days lockdown and affect the availability of essential commodities. Due to weak domestic consumption and consumer sentiment, there can be a suspension in investment which further adds pressure on the growth? According to the KPMG report “It is expected that the course of economic recovery in India will be smoother and faster than that of many other advanced countries”. In terms of trade, China is the world’s largest exporter and second-largest importer. It accounts for 13% of world exports and 11% of world imports. Up to a large extent, it will impact the Indian industry. In imports, the dependence of India on China is huge for the top 20 products (at the two-digit of HS Code) that India imports from the world, China accounts for a significant share in most of them.

India’s total electronic imports account for 45% of China around one-third of machinery and almost two-fifths of organic chemicals that India

purchases from the world come from China? For automotive parts and fertilizers China's share in India's import is more than 25%. Around 65% to 70% of active pharmaceutical ingredients and around 90% of certain mobile phones come from China to India. Therefore, we can say that due to the current outbreak of coronavirus in China, the import dependence on China will have a significant impact on the Indian industry.

Organic chemical	37%
Inorganic chemical	13%
Medicinal and pharma. products	36%
Dyes	28%

In terms of export, China is India's 3rd largest export partner and accounts for around 5% share. The impact may result in the following sectors namely organic chemicals, plastics, fish products, cotton, ores, etc. We also can't ignore that most of the Indian companies are located in the eastern part of China. In China, about 72% of companies in India are located in cities like Shanghai, Beijing, provinces of Guangdong, Jiangsu, and Shandong. In various sectors, these companies work including Industrial manufacturing, manufacturing services, IT and BPO, Logistics, Chemicals, Airlines, and tourism.

According to CII, GDP could fall below 5% in FY 2021 if policy action is not taken urgently. It is said that the government should take some strong fiscal stimulus to the extent of 1% of GDP to the poor, which would help them financially and also manage consumer demand. In the third quarter (October-December) growth is slowed down to 4.7% and the impact of COVID-19 will further be seen in the fourth quarter. FICCI survey showed 53% of Indian businesses have indicated a marked impact of COVID-19 on business operations. And 42% of the respondents said that up to three months could take for normalcy to return.

Let us have a look at the sector-wise impact on Indian industry:

1) Raw materials and spare parts -

Nearly 55% of electronics imported by India originate from China. These imports have already slid down to 40% in light of the coronavirus outbreak and subsequent lockdown. As a countermeasure, India is considering the promotion of indigenous production in a bid to reduce dependency on a single market. Additionally, China is India's third-largest

export partner for export of raw materials like organic chemicals, mineral fuels, cotton, etc, and a lockdown of the countries is likely to lead to a substantial trade deficit for India.

2) Chemical Industry -

Some chemical plants have been shut down in China. So there will be restrictions on shipments/logistics. It was found that 20% of the production has been impacted due to the interruption in raw material supply. China is a major supplier of Indigo that is required for denim. Business in India is likely to get affected so people securing their supplies. However, it is an opportunity. US and EU will try and diversify their markets. Some of the business can be diverted to India which can also be taken as an advantage.

3) Shipping Industry -

Coronavirus outbreak has impacted the business of cargo movement service providers. As per the sources, per day per vessel has declined by more than 75-80% in dry bulk trade. "The very large crude carriers (VLCCs) that were trading at over \$100,000 per day in December have dropped to \$15,000 per day as on February 7," Captain Rahul Bhargava, director of commercial & operations at Essar Shipping told Business Baltic Dry Composite Index (BDI), which was trading at about 1,500 on December 10, dropped to 976 on January 3. It was trading at 431 as on February 6. Baltic Cape index, for the first time in the history of the Baltic Index, dipped to negative digits on January 31 and is now trading at a negative 187. For an on-time charter yield of equivalent Cape-sized vessels, freight rate has come down to \$3,000 per day from \$22,000 per day. Similarly, Panamax vessel freight has come down to \$3,400 per day from \$12,000. Standard via email. A similar impact has been felt on dry bulk cargo movement, he added.

4) Auto Industry -

Which includes automobiles and auto parts will continue to face challenges on account of lack of demand, global recession, and falling income levels. Its impact on Indian companies will vary and depend upon the extent of the business with China. China's business no doubt is affected. However, current levels of the inventory seem to be sufficient for the Indian industry. If the shutdown in China continues then it is expected to result in an 8-10% contraction of Indian auto manufacturing in 2020.

5) Pharmaceuticals Industry -

The toll on the pharmaceutical industry is of significant concern for India, mainly as 70% of Active Pharmaceutical Ingredients (API) are imported from China. These active pharmaceutical ingredients are essential to a large number of pharmaceutical manufacturing companies in the country. As COVID-19 is rapidly making its way through India, medication is going to be the number one consumer demand, and because there aren't nearly enough APIs to manufacture drugs, the subsequent traders and the market are witnessing skyrocketing prices. The prices of vitamins and penicillin alone already see a 50% surge. Despite being one of the top formulations of drug exporters in the world, the pharma. The industry of India relies heavily on import as of bulk drugs. Due to the coronavirus outbreak, it will also be impacted.

6) Aviation -

After the Government of India indefinitely suspended tourist visas, airlines are said to be working under pressure. Nearly 600 international flights to and from India were cancelled for varying periods. Around 90 domestic flights have been cancelled, leading to a sharp drop in airline fares, even on popular local routes.

7) Apparel & Textile -

Due to the coronavirus outbreak, several garments/textile factories in China have halted operations that in turn affecting the exports of fabric, yarn and other raw materials from India. Indian textile and apparel industry is already staring at 1 crore (10 million) job losses owing to the COVID-19 pandemic, and going forward, it can face even worse effects. In domestic sector, 20 per cent apparel manufacturing companies are expecting to close down. 80 per cent companies feel that they are unlikely to retain the current workforce without government support. Around 59 per cent of the industry expects a 40 per cent drop in business, and 81 per cent apparel manufacturers have received order cancellations.

8) Electronics Industry -

The major supplier is China in electronics being a final product or raw material used in the electronic industry. Chinese vendors have hiked component prices by 2-3% due to supply shortages triggered by factory shutdowns. India's electronic industry may face supply disruptions, production, reduction

impact on product prices due to heavy dependence on electronics component supply directly or indirectly, and local manufacturing.

9) Logistic and transportation -

New Delhi estimating losses to the logistics sector at about Rs 50,000 crore due to the coronavirus lockdown, "With the lockdown extended to May 3, the cumulative loss estimate is as high as Rs 50,000 crores with the highest loss coming from the Aviation Sector, followed by the Roadways, in terms of lost Toll Taxes and Goods wasted on the road due to a sudden lockdown, grinding to a halt fully loaded trucks,"

10) IT Industry -

The New Year holidays in China has been extended due to coronavirus outbreak that adversely impacted the revenue and growth of Indian IT companies. It is feared that Covid-19 will significantly impact the \$180-billion Indian IT sector, and the impact may be worse than that of the 2008 Global Financial Crisis (GFC)

11) Retail sector -

The country's retail sector, comprising 70 million small, medium and big traders employing 450 million people, undertakes a monthly business of about USD 70 billion (approximately Rs 5.2 lakh crore) and is one of the hardest hit due to the global pandemic. Traders' body CAIT on Tuesday said India's retail trade has incurred losses to the tune of whopping USD 30 billion (about Rs 2.2 lakh crore) in the last fortnight alone due to the coronavirus pandemic. According to the Confederation of All India Traders (CAIT), the country's retail sector, comprising 70 million small, medium and big traders employing 450 million people, undertakes a monthly business of about USD 70 billion (approximately Rs 5.2 lakh crore) and is one of the hardest hit due to the global pandemic.

12) Tourism and Aviation -

Due to the coronavirus outbreak, the inflow of tourists from China and from other East Asian regions to India will lose that will impact the tourism sector and revenue. India is big on cultural and historical tourism, attracting domestic and foreign nationals throughout the year. It does not come as a surprise that a large number of confirmed COVID-19 cases in India include foreign tourists. But with visas being suspended and tourist

attractions being shut indefinitely, the whole tourism value chain, which includes hotels, restaurants, attractions, agents, and operators, is expected to face losses worth 1000 crores. Experts believe the tourism industry is likely to take a massive hit, and it could end up crippling the industry for the foreseeable future. After the Government of India indefinitely suspended tourist visas, airlines are said to be working under pressure. Nearly 600 international flights to and from India were canceled for varying periods. Around 90 domestic flights have been canceled, leading to a sharp drop in airline fares, even on popular local routes. Private airport operators have requested the Government to grant permission to impose a nominal passenger facilitation charge on airfares to cover the increased operating cost.

13) Real Estate/Building and construction

The real estate sector is one of the largest employment generators in the country and has a multiplier effect on around 250 allied industries. The sector is expected to contribute to around 13 percent of the country's GDP by 2025. However, the year 2019 has been a mixed bag for the Indian real estate industry, having attracted investments worth- USD 5 billion. Around 66 percent of these investments were in the commercial real estate market owing to healthy demand from private equity investors for stable rent yielding assets. On the other hand, the residential real estate sector has witnessed poor demand and lower absorption in the past few years owing to the economic slowdown, the NBFC crisis, cynical buyer sentiment, and developer defaults. This has led to higher unsold inventory across the major cities in India.

14) Agriculture -

The coronavirus lockdown will have an adverse effect on the agriculture sector in India. The nationwide lockdown has entrenched the economic system. The sector is facing a lot of trouble with labourers and the movement of goods. Even as agriculture produce is exempted from lockdown directives being an essential commodity, policemen are creating a lot of problems for the sector.

15) Education institute and universities

Schools around the country have been impacted by COVID-19, facing closures that could last several weeks that too during the crucial period

of academic year ending. Public schools and low-fee private schools especially are likely to face a larger impact on teaching and learning, owing to heavy reliance on brick and mortar means of delivering lessons. The challenge in a country like India is the additional economic burden facing the parents in the absence of school provided mid-day meals. Private schools that have the means and resources, on the other hand, could try to minimize the impact on teaching-learning but could face cash flow issues if fee payments are delayed. In higher education, most Higher Education Institutions (HEI) are not fully geared to implement online learning, with constraints around the availability of digital content, technology, and delivery capabilities. The impact of the COVID-19 outbreak is also expected to impact admissions to HEIs in the coming academic year. Placements, internships for students could also be affected by companies delaying the onboarding of students. The outbreak is also expected to have far-reaching consequences such as decreased global mobility of students (both inbound and outbound), difficulty in recruiting faculty, etc

16) Financial services and banking -

Uncertainty on the potential credit loss in portfolios will result in lower securitization deals thus impacting the fund-raising ability of NBFCs. While avoiding panic selling of bonds, scenario analysis on bond prices may be needed for banks to assess the capital impact under different interest rate scenarios. Buyers of existing securitized pools may choose to enforce the Credit Enhancements during the moratorium period, thus impacting the liquidity of the seller and the credit rate. On consumer credit, we expect affordable housing, two-wheeler financing, micro-finance, and gold loan exposures to be adversely impacted. Borrowers would require their credit facilities to be restructured based on revised business cash flows, thus necessitating a regulation for a one-time restructuring of loans impacted by COVID-19.

Conclusion -

The impact of COVID-19 on customers is profound and the full impact on the Indian economy is still unknown. While B2C and B2B organizations scramble to meet immediate and emergency needs, the pandemic has activated a new wave of commerce innovation. Above all, except for

essential services like electricity, gas, water supply, financial services(banking) and, public administration, defense, etc, all other sectors have been completely shut. There would be COVID-19 is having a 'deep impact' on Indian businesses, over the coming month's jobs are at high risk because firms are looking for some reduction in manpower. Further, it will be already the COVID-19 crisis that has caused an unprecedented collapse in economic activities over the last few weeks. The present circumstances are having a "high to very high" level impact on business activities. Further, firms are expecting a degrowth sales in the fiscal year 2020-21. So it is assumed at least one week for the

organization considering various factors of production- men, materials, capital to migrate to the production capacity

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COVID19: A CHALLENGE TO SACE

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Introduction -

The word Corona in Coronavirus means crown in Latin. Coronavirus gets its name from crown like spikes that it has on its surface. The virus has been named novel as it has not been identified previously. The outbreak of coronavirus started from Wuhan, Capital of china's Hubei province in December 2019 and has now spread across the globe.

The exact source of 2019 novel Corona virus has not been identified but it is suggested that the virus likely emerged from an animal source. In the word COVID19, CO stands for Corona and for D for disease. This disease was referred as 2019. The term COVID is created by world Health Organization (WHO).

The first Case of COVID19 pandemic in India was reported on 30 January 2020 in Kerala today on 10th May there are nearly 63,000 cases in India. Maharashtra alone accounts for over 20,000 infections.

COVID19 affects different people in different ways. Most infected people will develop mild to moderate illness-

- Common symptoms - fever, dry cough, tiredness
- Less Common symptoms-headache and pain, sore throat, diarrhoea, conjunctivitis, loss of taste or smell, rash on Skin, discoloration of fingers or toes
- Serious Symptoms- difficulty in breathing, Shortness of breath, chest pain or pressure loss of speech or movement.

Patient screening and triage -

Patients who present with fever and respiratory symptoms with an epidemiological link to COVID-19 should carry a high index of suspicion for the disease. The epidemiological link may involve-

- travel to an area that experienced an

outbreak,

- Close contact with an individual with a confirmed or high risk of infection, or
- Close contact with an individual with respiratory symptoms who had been in a geographic location that witnessed an outbreak within a 14-day period prior to the onset of symptoms. As the geographic area of involvement is expanding, clinicians need to keep themselves updated on the list of affected countries and territories. Following several generations of spread with a country, local transmission of disease occurs, and patients may present with no history of travel to a location with a known outbreak.

Critically ill patients may present to the emergency department from the community or by inter-hospital transfer to the intensive care unit. In such instances, a detailed inquiry should be carried out to ensure appropriate screening and infection control precautions should be followed.

How to get tested for Coronavirus?

In case person feel your symptoms are specific to the coronavirus, there healthcare provider can get in touch with CDC or the local healthcare departments for testing instructions. There are specific labs set up for conducting coronavirus tests, so they may be directed to one of these labs.

There are different types of coronavirus tests that can be done:

- Swab Test – In this case, a special swab is used to take a sample from your nose or throat
- Nasal aspirate – In this case, a saline solution will be injected into your nose and, then a sample is taken with a light suction
- Tracheal aspirate – In this case, a thin

tube with a torch, also known as a bronchoscope, is put into your mouth to reach your lungs from where a sample is collected.

- Sputum Test – Sputum is thick mucus that gets accumulated in the lungs and comes out with a cough. During this test, you're required to cough up sputum in a special cup or a swab is used to take a sample from your nose.
- Blood test – In this case, a blood sample is taken from a vein in the arm.

A rapid test has also been started for the COVID-19, which involves taking samples from the nose, throat, and lungs. This ensures a speedy and accurate diagnosis and is used in all CDC-approved.

Before the test, the concerned health professionals may request you to wear a mask during the test. In case there are any other steps that need to be taken, the healthcare professional can communicate that to you.

Risks associated while testing for Coronavirus -

During the test, it may feel a gagging sensation when the swab will be inserted in your nose and throat. The nasal aspirate may especially seem a bit uncomfortable. However, all of these effects are temporary and will go away shortly after the test. In some cases of tracheal aspirate, there may be bleeding or infection. In the case of the blood test, no risks are observed. There may be a slight swell and pain in the area where the needle was inserted, however it goes away pretty soon.

What next if the Coronavirus test comes positive?

In case your test results come out positive, then you may be affected by the coronavirus. Although there are no specific treatments for the coronavirus infection, however, the healthcare professional may suggest some steps that'll help you to relieve the symptoms.

Some of the steps you can follow to ease the symptoms are:

- Drinking a lot of fluids
- Getting plenty of rest
- Taking over-the-counter medicines

In case the condition gets worse or patients show signs of pneumonia, he/she should get

admitted to a hospital. Some of the common symptoms of pneumonia are severe cough, laboured breathing, and high fever.

If you diagnosed with coronavirus, you should follow the below steps to prevent any spread of infection:

- Don't leave home unless to get medical help
- Always wear a face mask in public places or when you're around other people
- Don't share any personal items such as drinking cups, eating plates, towels, or any other items with anybody.
- Always wash your hand thoroughly for around 20 seconds. In case soap water is not available, you can use an alcohol-based sanitizer, which at least contains 60% alcohol.

In case your results turned negative, you can check with the healthcare professional whether any further tests are required. It's better to take precautions to not prevent the infection any further.

On the other hand, you can avoid getting infected by coronavirus by following the below steps:

- Wash your hands thoroughly for 20 seconds and use alcohol-based sanitizers in absence of soap-water
- Avoid touching your eyes, nose, or mouth a lot
- If possible, avoid being close to people who are sneezing or coughing
- Clean the household items which are frequently handled with a disinfectant spray

Cure and Prevention -

There is no specific treatment for the disease caused by novel coronavirus. However many of the symptoms can be treated and therefore the treatment based on the patient's clinical condition. Moreover supportive care of infected person can be highly effective; plasma therapy treatment involves blood transfusion from a patient who has been recovered from COVID19. Hospitals in New Delhi and Mumbai have used this therapy to treat severely ill patients which had aided their recovery. Many countries including India are trying to find out vaccine against COVID19. Right now, there

are at the experimental stage, hence at present there is no vaccine against it.

Also at the present, there no herbal medicine or treatment for COVID19. Antiviral drugs directly affect the coronavirus ability to thrive inside body.

Drugs that can calm the immune system- The patients become seriously ill when their immune system overreacts and starts causing collateral damage to the body.

Antibodies either from the survivor's blood or made in lab can track the virus. The latest clinical trial of Remdesivir- an antiviral drug and this drug originally developed to treat Ebola have been encouraging. The US Institute of Allergy and Infectious diseases found that Remdesivir cut the duration of symptoms from fifteen days down to eleven. There is much talk but little evidence that pair of HIV drugs Lopinavir and Ritonavir would be effective at treating coronavirus. There has been some evidence they can work in laboratory but he studies in people have been disappointing.

Chloroquine and related derivatives of HydroxyChloroquine may have antiviral and

immune calming properties because it can help to regulate immune system; however WHO says there is no definitive evidence of its effectiveness.

The U.S. Food and Drug Administration granted permission for some medications approved for other diseases to be used to treat severe COVID-19 when no other options are available. Two malaria drugs — HydroxyChloroquine and Chloroquine — and an antiviral drug, Remdesivir, have been approved for this use.

Treatment is directed at relieving symptoms and may include:

- Pain relievers (ibuprofen or acetaminophen)
- Cough syrup or medication
- Rest
- Fluid intake

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Study of Omkar Chanting, Suryanamskar, Pranayama and Meditation on Respiration in Young Student

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Abstract -

Stress is very common today, its effect on the nervous system, immune system etc. The aim of the present study was to engage young students, similar to keep them away from stress and to improve the respiratory system. So, 20 male young students were selected and the yogic practice was suggested for one month at home during lockdown in India from 6th April 2020 to 6th May 2020. Respiratory rate per minute was taken before and after the experiment. Results shown significant improvement in respiratory functions. Similarly, subjects also shown good flexibility, stretching ability, calmness, relaxed feelings of the body and were free from stress. Regular practice helps to reduce the stress.

Keywords - Omkar Chanting, Suryanamskar, Pranayama, Meditation, Respiration, Stress, Flexibility etc.

Introduction -

Every human society that may be rural or urban is affected by air pollution and air borne infections. It causes various respiratory diseases. The respiratory system is one of the most vital systems in the body, it is composed of the nose, air passage (larynx, pharynx and trachea) and finally lungs. The exchange of oxygen takes place in between lungs and blood cells. The oxygen provided by our respiratory system is used by hundred billions of cells of our body. Among the diseases that affect the respiratory system Yoga exercises i.e. Omkar Chanting, Suryanamskar, Pranayama, and Meditation controls mind, emotions, making the body more relaxed and allowing to breathe easier. These exercises do not raise the respiratory rate but increase the oxygen, the elastic recoil of the lungs, prevent recurrent infection and aerate the whole lungs. (Hetal Amin et al., 2016)

Hundreds of millions of human population suffer every day from chronic respiratory diseases.

According to WHO (2007) currently 300 million people have asthma, 210 million people have chronic obstructive pulmonary diseases. Goyeche RMet al., 1982, summarized the use of yogic practices in the management of patients with bronchial asthma. Use of yogic practice like physical exercise (asanas), pranayama (breathing), kriyas (cleansing), and meditation, physicians have found additional improvement in the patients. Doctors believe yoga practices help patients to access their own internal experience and increase self-awareness (Kunalayananda, S, et al., 1971).

Yoga is an ancient discipline designed to bring balance and health to physical, mental, emotional and spiritual dimensions of the individual, it is popular practice in India and increasing in western society. The outbreak of COVID19 has been declared as a Pandemic (WHO) and it is declared as a Public health emergency at international concerns (PHEIC). We know that it is transmitted through direct contact with respiratory droplets and causes coughing and sneezing with many other symptoms, especially affects the respiratory system. This virus has now spread across many countries and territories. Many countries have declared total or partial lockdown. Reputed sources such as UNICEF, WHO and National health advisories giving valuable information regarding the prevention measures regarding this virus.

In India, we are in lockdown, students, parents, all other members are in the lockdown, stayed at home. So, I selected some young friends and suggested some yoga practices to strengthen respiration and nervous system. The suggestions are only to improve or to maintain physical, mental and societal health.

Materials and Method -

The experiment was suggested during COVID19 lockdown in India. Study group comprises 20 young students. All subjects were

non-alcoholic, non-smokers and they had similar dietary habits. They were not practicing any known stress relieving or relaxation techniques previously. All the subjects were asked to inform about the initial rate of respiration per minute (mean). These subjects were suggested following packages for 20 days comprising Omkar Chanting, Suryanamskar, pranayama and finally meditation, 60 minutes twice a day. The schedule consists of:

Omkar Chanting - 10 minutes.

Suryanamskar - 10 minutes.

Pranayama - 20 minutes.

Meditation - 20 minutes.

Chanting AUM practiced in sitting position with closed eyes, AUM represents 3 distinct vibratory sounds of 'A' (ah), 'U' (oh) and 'M' (mm). The Aah sound originating from solar plexus is related to lower lungs breathing (<http://www.healthandyoga.com/html/pran/nadishudhi.aspx>). The Ohh sound originating from the chest which corresponds to mid chest breathing. The 'Mm' sound associated with upper lungs breathing. The AUM word was repeated several sound with prolong breath holding and continued for 10 minutes. (<http://guruprasad.net/posts/why-Indian-teachers-punish-students-scientific-reason>)

The suryanamskar practice is good for stretching, it is a static and dynamic exercise. Each round involves 12 postures in succession with forward and backward bending along with deep exhalation and inhalation along with 12 mantras of Surya respectively. (Nani R, 2013)

The Pranayama is the process of controlling Prana. So pranayama is the science related to vital forces supplying energy and controlling body mind complex. Pranayama is rhythmic breathing bringing the breath in natural rhythm by controlling the process of inhalation, exhalation and retention. As they are beginners Bhasrika, anulamvilom, kapalbhati, bhramari and Ujjaayi pranayama were suggested.

The meditation is an approach to training the mind. It is extremely difficult for a beginner to sit for hours and think of nothing or have an empty mind. In general, the easiest way to begin meditating is by focusing on the breath was suggested.

After suggesting of this package for 20 young subjects after one month, the mean rate of respiration per minute was telephonically collected

and was found to be significantly improved. Statistical analysis was done by using 't' test.

Table (SEQ Table * ARABIC)-Showing changes in rate of respiration/min. before and after one month of yoga practice for young subjects.

Parameter	Before Yoga	After 30 Days Yoga	P value
Rate of respiration' min.	17.82	13.10	P<0.001
	EMBED	EMBED	
	Equation 3 }	Equation 3 }	
	1.6	1.4	

P<0.001 means significant.

Discussion -

The present study were undertaken from 06th April 2020 to 06th May 2020 during lockdown in India due to COVID-19 prevention. The main objective of this study is to engage the young students in the early phase of lockdown and prevent them from stress. This actively also encourages me to continue my yoga practice at home. Similarly this activity can support to strengthen the respiratory system.

The yogic practice like Omkar chanting, Suryanamskar, Pranayama, Meditation has influenced on ventilatory functions in young males. We found that regular practice of above package for one month significantly reduces the rate of respiration/min., whereas due to Suryanamskar a series of physical postures, alternate backward and forward bending the subjects noted, improved body flexibility. They also noted relax, calm body feeling.

Our results are corroborated with the yoga practice due to copious oxygenation the patient shows deep effects of detoxification and relaxing effect (Nani R, 2013). An increased systolic blood pressure, peak respiratory flow rate, forced vital capacity and reduction of respiratory rate, Heart rate (HR) and diastolic blood pressure was studied by Sasiet al; (2011) and Abraham B. Regular yogic practice strengthen the respiratory muscles; increases the excursion of diaphragm and lungs as well as thoracic compliances. (Makwana, K. et al; 1988). Joshi, LN.etal. (1992) suggested that asanas and pranayama resulting in the reduce of resting respiratory rate and increases vital capacity, timed vital capacity, maximum voluntary ventilation, breath holding time and maximum inspiratory and expiratory pressures. Omkar chanting consists of loud alternate "AUM", by chanting 'aaaa' one can feel the sensation and resonance of nervous system in the stomach and chest region. Chanting also creates sensation in throat, chest, and Nasal cavity and even in skull/ brain region. From Omkar chanting the energy moves from the abdomen all the way up to the brain region, thereby channelizing

the energy and activating Nervous system. Aum mantra is a cosmic sound which initiate the creation of Universe. The scientific explanation based on physics i.e. sound, vibration and resonance with some long term benefits. (Telles S,et al.,1995)

Conclusion -

Due to lockdown it is only possible to tabulate single parameter. All the subjects due to this yogic practices presented reduced resting respiratory rate. Due to Suryanamskar the subject noted improved flexibility.Omkar chanting gives calm, relax and peace for mind. In lockdown it is very difficult to stay at home especially for the young students, they may experience stress. So by this practices, I got success to keep all my 20 friends away from stress, and improved their as well as mine body functions especially (Nervous and Respiratory functions). This may help to preventive for respiratory infections.

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COVID - 19 and Life style of Adivasi People in Nandurbar District: A scenario

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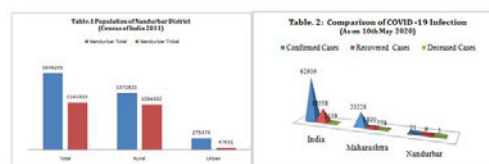
In December 2019 the entire world was supposed to be exposed to an unwanted situation when China announced the infection of the respiratory system by coronavirus. It was the beginning of COVID 19. Initially it was the epidemic in Wuhan, the business hub of China. The novel coronavirus killed more than 1800 and infected over 70,000 individuals in one and half months (Shereenet.al. 2020). This was not the first time that the world was introduced to coronavirus. Thirteen years before i.e. in 2003, people from Guangdong province were infected with a member of beta coronavirus the subgroup called SARC-CoV that caused SARS i.e. Severe Acute Respiratory Syndrome in human beings. This syndrome has killed 776 and more than 8098 people were infected across 109 countries throughout the world. On the other hand Novel coronavirus SARS CoV2 infected 4, 069, 8764 individuals in 212 countries and territories around the world and caused 278,524 deaths till date of this writing.

For India, this is not the first time to get encountered with pandemic. The epidemic and pandemic history of India have shown the records of several accounts of Cholera, influenza, smallpox, dengue and others. The Cholera epidemic existed in India for about 156 years with six waves of pandemic (From 1817 to 1973). India has faced the most devastating situation during the influenza or Spanish flu pandemic in the year 1918-19 that caused 20-50 million deaths worldwide (AnanthaEashwaret.al. 2019). But COVID-19 pandemic is the most disastrous one. Since the vaccine is not available for COVID -19 it is very important to stop the spread of infection. In India Total confirmed cases are 62939 while the reported deaths were 2109 till the writing of this paper.

Maharashtra is the state in India to record the highest COVID -19 cases. The wave of COVID 19 began from pune on 9th march 2020

and then on 13th march it was declared as pandemic in five cities with closure of commercial and educational establishments. As on 10th May, the state has confirmed 20228 cases from which 3800 were recovered and 779 deceased. (ArogyaSetu, at 11:10am). As on 14 april 2020, the first lockdown was completed and Mumbai, Pune and Thane districts were recorded as red zones with highest cases in Maharashtra. Dhule and Jalgaon district from Khandesh region has also reported two cases each whereas Nandurbar is the district that was free from COVID -19 infection. Till 17th April Nandurbar district was untainted and designated as Green Zone in the State. On 18th April the first case was reported to be positive in Nandurbar District.

Nandurbar is one of the tribal districts in maharashtra. The Tribals population is significant in many countries. According to the 2011 census, Nandurbar district's total population is 18, 48,295 of which 13, 72,821 is rural and 2, 75,474 urban population. Again from the total of 11, 41,933 Scheduled Tribe population, the district comprises 10, 94,302 rural population and 47631 urban population and is given in Table.1 (Census of India 2011). From the data available it is clear that about 75 % of the population of the Nan durbar district is living in rural areas and nearly 80 % of the rural population is tribal. The present scenario of COVID 19 in Nandurbar districts reveals 21 positive cases till date with 09 recovered and 02 deceased. The comparison of confirmed, recovered and deceased cases in India, Maharashtra and Nandurbar District is given in the Table 2.



The tribal people from Nandurbar district are

always seen in social groups and communities and normally found living away from civilized people. They are inhabitants of mountains, deep valleys and dense forests and even in the coastal areas. The tribal people were inhabitants of forest in the earlier days and preferred to eat naturally available food material from the forest (Gavit, 2019). 'The natural food material they consume might provide them immunity to fight against several pathogens if they get exposed to them. They used to hunt animals and consumed their flesh. As per the available knowledge of COVID -19, it becomes essential for all the people across the world to protect the community from the infection. Stay at home is the only way to break the chain of infection of COVID 19 as it primarily spreads from person to person. Tribal people from Nandurbar district especially from Akkalkuwa and Dhadgaon tehsil (hilly areas) are economically backward. They are living in isolated or dispersed habitat (Fig.1) and have no means of transportation and communication (Gavit, 2019). In normal situations too the person living in urban areas never wishes to visit hilly areas like Akkalkuwa, Dhadgaon, Molagi and such hilly villages. The affected tehsils in the Nandurbar district are Shahada, Akkalkuwa and Nandurbar while Navapur, Dhadgaon and Taloda tehsils are free from COVID -19 till date.



Fig.1 Dispersed habitat of tribal people from Dhadgaon Tehsil

Fig.1 Dispersed habitat of tribal people from Dhadgaon Tehsil

The possible reasons of the untainted tehsils can be explained with the lifestyle of tribals in the district. These are -

1) 75% of the population of the district is tribal and 80% of the tribal population is rural. As a result the spread of the disease is minimised due to strict lockdown policies applied by the tribes. They have closed the roads of their villages. The collector of Nandurbar district formed the "Gram Dakshata" committee to keep watch on the migration of people into their regions from neighbouring states i.e. M.P and Gujrath and even from Dhule, the red zone district that flanks

Nandurbar. The Gram Suraksha Dal of villages are working in tandem with police and monitor boundaries and roads in 16 villages (Times of India, Nandurbar, and 6th May, 2020). They started practising social distancing sincerely. (Fig.2)

2) Tribal community mostly prefers natural food material into their diet. They consume fresh herbs which is a very important part of their diet thus boosts their immunity. They are habitual of eating cucumber, lemon, papaya and banana. It is experienced that COVID -19 patients are given Vit.C rich food material. If the tribes are habitual of having such fruits, it is possible that they might not be infected with COVID-19.

3) Tribals have so many rituals which are very unique for them. They believe in the spirits of the jungle. They are fond of cleanliness and prefer to have baths twice a day. Death is one of the most important social aspects of their life. Whenever death is reported in the village, all the villagers do not cook their meal till the funeral ends. After returning home they wash all possible clothes and the utensils. Water is brought freshly and then they prepare their food and eat. This practice seems to be surely useful and can save the life of tribals if the death of suspected COVID 19 patient will take place.



Fig.2: Tribals from Akkalkuwa Tehsil practicing social distancing in COVID 19 situation

Fig.2: Tribals from Akkalkuwa Tehsil practicing social distancing in COVID 19 situation

It has been seen that corona cases reported from the three Tehsils i.e. Nandurbar, Shahada and Akkalkuwa were the cases of migrants only. COVID 19 patients recorded in these tehsils have shown their travel history from the Corona hotspots like Malegaon and hence were responsible for the spread of disease into local tehsils. Again the spread was reported in the crowded area where the houses are clustered together. Thus it can be said that people who are living in a naturally isolated habitat, with habits of cleanliness and taking natural foods to provide immunity can be less affected by COVID-19 infection.

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Can Dietary Supplements Work as Tool to Defend Against Viruses?

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Abstract -

Viruses are the tiny particles much smaller than the bacteria. Every ecosystem on earth contain viruses. They lack the capacity to live and reproduce outside the body. They are of two types that is DNA viruses and RNA viruses. There are many viruses they cause infection to man. To avoid viral infections several strategies are adopted i.e. clean your hands, manage stress, get vaccinated, symptomatic treatment and to prevent the infection supplements can be useful to boost immune system. Proper dietary supplements can defend viruses.

Keywords - Diet, Viruses, Vaccination, Prevention, Immune, Supplements, Vitamins etc.

Introduction -

Our immune system consists of a collection of cells, processes, and chemicals that constantly defends our body against invading pathogens, including viruses, toxins, and bacteria. For prevention to keep our immune system healthy is key to prevent infections and diseases. To make a healthy lifestyle by consuming nutritious foods and getting enough sleep and exercise are the most important ways to bolster our immune system.¹

What to know about viruses² -

Viruses are the microscopic parasites, generally much smaller than bacteria. They are tiny, ranging in size from about 20 to 400 nm in diameter, head of the pin can contain Billions. Some are rod shaped, round and 20 sided and others have fanciful forms, with multisided "heads" and cylindrical "tails." Sometimes a virus can cause a disease so deadly and other viral infections trigger no noticeable reaction. A virus may have one effect on one type of organism or a different effect on another, for example this explains how a virus that affects a cat may not affect a dog.



Almost every ecosystem on Earth contains viruses. They lack the capacity to live and reproduce outside of a host body. Before entering a cell, viruses exist in a form known as virions. During this phase, they consist of two or three distinct parts:

- Genetic material, either DNA or RNA.
- A capsid and a protein coat, which protects the genetic information.
- Sometimes a lipid envelope is present around the protein coat when the virus is outside of the cell.
- A virus does not contain a ribosome, so they cannot make proteins. This makes them totally dependent on their host. They are the only type of microorganism that cannot reproduce without a host cell.

Viruses have different sizes and shapes, and they can be categorized by their shapes.

- **Helical** - Tobacco mosaic virus has a helix shape.
- **Icosahedral** - They are near-spherical viruses, for example most animal viruses.
- **Envelope** - Some viruses cover themselves by creating a protective lipid envelope, for example influenza virus and HIV.

Other shapes are mostly available in nonstandard shapes that combine both helical and Icosahedral forms.

Viral diseases -

These include: Smallpox, Common cold and different types of flu, Measles, mumps, rubella, chicken pox, and shingles, Hepatitis, Herpes and cold sores, Polio, Rabies, Ebola and Hanta fever, HIV, the virus that causes AIDS,

Severe acute respiratory syndrome (SARS), Dengue fever, Zika, and Epstein-Barr, Some viruses, like the Human Papilloma Virus (HPV), can lead to cancer.

How Virus Infects You³ -

The type of host cell, viruses follow the some steps to replicate:

1. A virus attaches to a host cell.
2. The particle releases its genetic material into the host cell.
3. The injected genetic material manages the host cell's enzymes.
4. The enzymes assemble parts for new virus.
5. The new particles assemble the positions into new viruses.
6. The new particles break free from the host cell.
7. Once the new viruses are made, they leave the host cell in one of two Ways:
 - They break the host cell and destroy the host cell.
 - They pinch out from the cell membrane and break away with a piece of the cell membrane, in this way, the host cell is not destroyed.

Strategies to stay healthy⁴ -

Clean your hands - Some germs are airborne, so illness occurs after you touch a contaminated surface. Mostly germs move from your hands into your eyes, nose, or mouth, so also make an effort not to touch your face.

Keep your body in top shape - Maintaining a healthy and balanced diet, exercising regularly, and getting enough sleep can help to keep our body and our immune well.

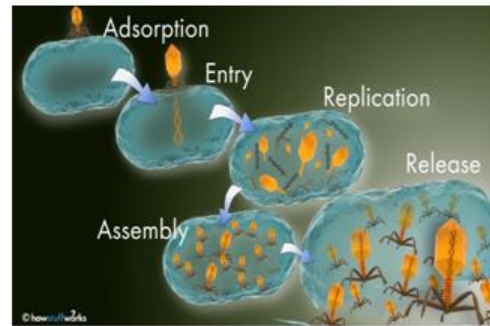
Manage stress - High stress levels may impair the immune system. So, try to be aware of our stress levels and work to lower them when they get elevated.

Get vaccinated - Vaccination against the flu and other diseases stimulates the immune system to protect against illness. Vaccine teaches the immune system to recognize specific pathogens and prepare them to defend.

Treatment and drugs² -

Infections caused by Bacteria can be treated with antibiotics, but viral infections require either

vaccinations to prevent them in the first place or antiviral drugs to treat them.



Antiviral drugs do not destroy the pathogen, but they inhibit their development and slow down the progress of the disease.

Antiviral drugs are also available to treat infection with the herpes simplex virus, hepatitis B, hepatitis C, influenza, shingles, and chicken pox.

Vaccines² -

The cheapest and most effective way to prevent viruses is vaccinations. In eliminating diseases some vaccines have succeeded, such as smallpox.

Vaccinations of virus consist of:

- Aweakened form of the virus
- Viral proteins called antigens, which stimulate the body to form antibodies that fights against future infections with the same virus.
- Live attenuated viruses, like immunization for poliomyelitis

Currently, vaccinations exist for polio, measles, mumps, and rubella, among others. Widespread use of these vaccines has reduced their prevalence dramatically.

Supplements to Boost our Immune System⁴ -

Research has shown that, supplements with certain vitamins, minerals, herbs, and other substances can improve immune response and protect against illness. However, it's important to note that no supplement will cure or prevent disease.

In case of COVID-19 pandemic, it's especially important to understand that no supplements, diet, or lifestyle modification other than social distancing and proper hygiene practices can protect you from COVID-19.

Instead, this article provides information on supplements that may bolster immune system defences in general.

Here are some supplements that are known for their immune-boosting potential.

1. Vitamin D - Is a fat soluble nutrient essential for health and functioning of immune system. Vitamin D enhances the pathogen fighting effects of monocytes and macrophages and decreases inflammation, which helps to promote immune response. In fact, low vitamin D levels are associated with an increased risk of upper respiratory tract infections, including influenza and allergic asthma. Some studies show that supplements with vitamin D may improve immune response. In fact, recent research suggests that by consuming this vitamin may protect against respiratory tract infections. Depending on blood levels, anywhere between 1,000 and 4,000 IU of supplemental vitamin D per day is sufficient for most people, though those with more serious deficiencies often require much higher doses.

2. Zinc - Is a mineral that is commonly added to supplements and other healthcare products like lozenges that are meant to boost your immune system. Because zinc is essential for immune system function. Zinc is needed for immune cell development and communication and plays an important role in inflammatory response. A deficiency in this nutrient, affects our immune system's ability to function properly, can cause an increased risk of infection and disease, including pneumonia. Numerous studies shows that zinc supplements may protect against respiratory tract infections like the common cold. Taking zinc for long term is typically safe for healthy adults, as long as the daily dose is under the set upper limit of 40 mg of elemental zinc.

3. Vitamin C - Is taken to protect against infection due to its important role in immune health. Vitamin C supports the function of various immune cells and enhances their ability to protect against infection. It's necessary for cellular death, which helps to keep our immune system healthy by clearing out old cells and replacing them with new ones. Vitamin C also functions as a powerful antioxidant, protecting against damage induced by oxidative stress, which occurs with the accumulation of reactive molecules known as free radicals. Oxidative stress can negatively affect immune health and is linked to numerous diseases. Upper limits for vitamin C are 2,000

mg. Daily doses typically range between 250 and 1,000 mg.

4. Elderberry - Black elderberry (*Sambucus nigra*), which has long been used to treat infections, is being researched for its effects on immune health. Elderberry extract demonstrates antibacterial and antiviral potential against bacterial and viral pathogens responsible for upper respiratory tract infection. They enhance immune system response and may help to shorten the duration and severity of colds, as well as reduce symptoms related to viral infections. Elderberry supplements are most often sold in liquid or capsule form. Elderberry supplements may reduce upper respiratory symptoms caused by viral infections and help alleviate flu symptoms. However, more research is needed.

5. Medicinal Mushrooms - Since ancient times to prevent and treat infection and disease medicinal mushrooms are used. For their immune-boosting potential many types of medicinal mushrooms had studied. For example, Cordyceps, lion's mane, maitake, shitake, reishi, and turkey tail are all types that have been shown to benefit immune health. Medicinal mushroom products can found in the form of tinctures, teas, and supplements.

Other Supplements with Immune-Boosting Potential -

Aside from the items listed above, there are many supplements that may help to improve immune response:

1. Astragalus - It is an herb commonly used in Traditional Chinese Medicine (TCM). An animal study suggests that its extract may significantly improve immune-related responses.

2. Selenium - It is a mineral that's essential for immune health. Animal research demonstrates that, selenium supplements may enhance antiviral defence against influenza strains, including H1N.

3. Garlic - It has powerful anti-inflammatory and antiviral properties. It enhances immune health by stimulating white blood cells like NK cells and macrophages.

4. Andrographis - This is an herb, contains andrographolide and a terpenoid compound found to have antiviral effects against respiratory disease-causing viruses, including enterovirus D68 and influenza A.

5. Licorice - It contains many substances, including glycyrrhizin that may help to protect against viral infections. According to research, glycyrrhizin exhibits antiviral activity.

6. B complex vitamins - B vitamins, including B12 and B6, are important for healthy immune response. But many adults are deficient in them, which may negatively affect immune health.

7. Curcumin - Curcumin is the main active compound of turmeric. It has powerful anti-inflammatory properties, it may help improve immune function.

8. Echinacea - It is a genus of plants in the daisy family. Certain species of this plant shows improvement in immune health and may have antiviral effects.

9. Propolis - Propolis is a resin-like material produced by honeybees and it has immune-enhancing effects and may have antiviral properties.

However, keep in mind that many of these supplements' potential effects on immune health have not been thoroughly tested in humans and need for future studies.

Although these supplements may offer a small benefit for immune health but they cannot be used as a replacement for a healthy lifestyle. Maintaining a balanced diet, getting enough sleep, engaging in regular physical activity, and no smoking are some of the important ways to help keep your immune system healthy and reduce your chances of infections.

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Effects of Outbreak of Corona Virus on Education System

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Abstract -

Corona virus is a large family of virus. It may cause illness in humans or animals. In humans, there are many coronaviruses which are known to cause respiratory infections. They are ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Recently, the most discovered coronavirus causes coronavirus disease COVID-19. The pandemic has disturbed the higher education sector. The World Health Organisation (WHO) has characterized COVID-19 as pandemic. There are many countries in the world which went into lockdown. They placed restrictions on the movement of people. Many countries barred international visitors to blunt the spread of the virus and to prevent community transmission. The present research paper dealt with the impact of lockdown on education system.

Key Words - Corona virus, disease, respiratory, syndrome, pandemic, lockdown, education system.

Introduction -

Education is the process of facilitating learning. It means of gaining knowledge, skills, values, beliefs, and habits. There are number of educational methods including teaching, training, discussion, and story telling. Education frequently takes place under the guidance of educators, however learners can also educate themselves. Education system is often cited as one of the main contributors to its economic development. But the outbreak of the coronavirus covid 19 pandemic has created quick and unprecedented encounters in the field of education.

The COVID-19 pandemic is first and foremost a health crisis which has affected educational systems worldwide. The large number of Indian students enrolled in abroad universities,

mostly in the country worst affected by the pandemic, Many countries in the world have decided to close schools, colleges and universities. Some countries have implemented localized closures affecting millions of learners. Nowadays, India is going through a big crisis when Covid19 has put a great impact on government services. Most of the state governments have closed educational institutions to avoid the spread of the covid 19 pandemic.

The following figures correspondence to the number of learners enrolled at pre-primary, primary, lower secondary and upper secondary levels of education. It also shows the learners enrolled at tertiary education levels. The enrolment figures based on the latest UNESCO Institute for Statistics data.



School closures have a great impact not only on students, teachers, and families, but they have also a impact on far-reaching economic and societal consequences. The impact of the lockdown is more severe for deprived children and their families. It has interrupted the learning and compromised nutrition. The lockdown has a severe impact on childcare problems which is resulting on economic cost to families. They have shed light on several economic and social factors. For example- debt, digital learning, insecurity, homelessness, healthcare, disability services access to childcare and internet. There is no certainty when the schools will be reopened.

The closures of schools and universities will may have a long -term impact on the continuity of learning. It is a critical time for the educational system, especially - SSC board examinations, admissions of nurseryschool, entrance tests of various universities and competitive examinations. The closure of schools, colleges and universities have impact on teaching and assessment methodologies.

The private schools have low-income. So, they could not adopt online teaching methods. On the other hand, they have completely shut down their schools for not having access to the solutions of e-learning. The students no longer have access to healthy meals during the pandemic time. They are subject to economic and social stress.

The effects of the covid 19 pandemic on the employment rate raise fear in everybody's mind. During this current situation, graduates in India are afraid of withdrawal of job offers from corporates. The impact of lockdown has transformed the centuries- the conventional teaching model to one driven by technology.

In our country the Union government announced new dates to conduct the JEE and NIIT exams. The JEE (Mains) 2020 will now be conducted between July 18-23 while NEET 2020 will be held on July 26, 2020.

The civil services (preliminary) examination 2020, scheduled to be held on May 31, therefore, stands deferred, the note added. The new dates of the exams will be declared once the lockdown is lifted completely.

It has been decided by Savitribai Phule Pune University to start mapping syllabus with online courses. The university has also formed a panel to look at the alignment of curriculum to the courses available on Swayam - a massive open online course (MOOC) platform created by the Union government to develop online teaching learning resources.

The University management has decided that 20 percent syllabus of every domain will be mapped with MOOCs, of which the study will be evaluated by teachers.

Many university graduates have been affected by the COVID-19 pandemic. They have experienced major teaching disruptions in the final part of their studies. Students are experiencing

major disruptions in their evaluations. Many exams have been postponed or cancelled. The state government has taken decision to conduct the final year exams in the month of July. But it's not sure, it will depend on the situation in that month.

Traditional exams with online assessment tools are going to be replaced in the higher education by universities and colleges. This is a new area for both teachers and students. Student's assessments will have to be on larger amount of error. (Piopiunik et al. 2020).

The lockdown of colleges, universities and institutions not only affects internal assessments, bur all exams for the main public qualifications – GCSEs and A levels - have been cancelled for the entire unit in the UK. We will observe similar actions around the world during the lockdown period.

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Measures -

In order to limit the interruption of education,

the UNESCO has recommended the use of distance learning programmes. It has also been recommended to open educational applications and platforms for schools and teachers. They can use it to reach learners remotely. Still, there are a few villages in India where internet connectivity is not strong. To overcome on poor internet connectivity, every day in the morning and evening, it has been confirmed two-time slots on MHRD's Swayam channel to host the content for television and radio to reach out to them due to poor internet connectivity. Audio lectures broadcasted through radiowill be helpful for the students in rural areas as well as for the visually impaired students to

access the syllabus.

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Covid-19 and The Cataleptic World

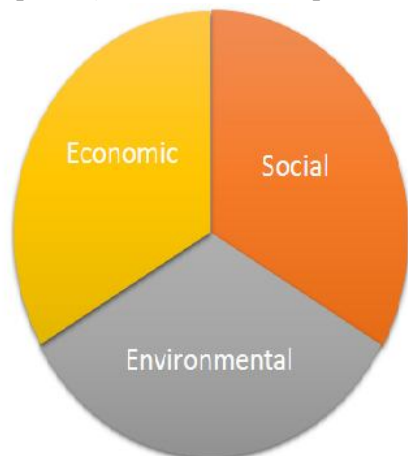
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Disasters begin suddenly and largely affect our lives and livelihood. In similar manner, the SARS-CoV-2 outbreak which started from China has now spread to more than 200 countries and Territories affecting more than 3.5 million people and 250,000 deaths.

Impact of Covid-19 -

The Coronavirus outbreak has affected almost all the components of world in multiple ways. Things which were supposed to be unstoppable stopped and things which were supposed to be impossible have already happened. The impact can be broadly classified into 3 major parts: i) Economic Impact ii) Social Impact iii) Environmental Impact.



1. Economic Impact -

a) Global Economy -

The Coronavirus crisis has put Global Economy to standstill. It has pushed economies all across globe into what might be the worst ever recession world has seen in last few decades. IMF has projected contraction of -3% in world GDP in 2020, far worse than during the Great Recession. WTO estimated a fall of global merchandise trade volume by between 13 to 32% in 2020 compared to 2019. However looking at the uncertainties lying ahead many economists believe that even these are the

optimistic predictions.

Corona outbreak has severely impacted majority of the industries. Logistics are also not able to function, disrupting supply chain all around the world. Service industry is also badly affected due to this rare disaster. All this has resulted into many folds increase in unemployment. Challenges of Poverty, Malnutrition, and income disparity are becoming stronger and posing higher threats due to the pandemic.

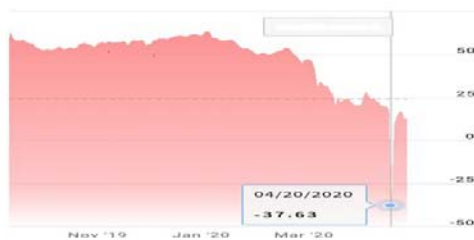
b) Retail Trade -

Enforcement of social distancing, lockdown measures has forced the closure of Brick and Mortar businesses. Except for the essential supplies, all the retail trade is virtually stopped from the shops. Closure of malls and shops has resulted into more than 50% of jobs in retail trade sector with risk of closure of around 30% shops.

c) Crude Oil -

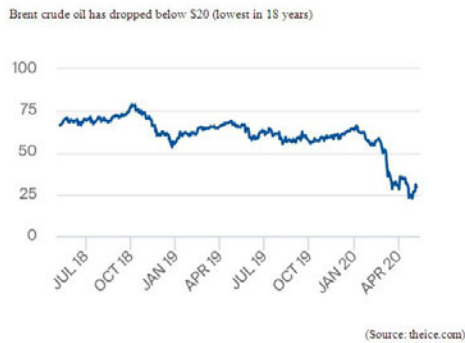
Demand of crude oil has fallen sharply due to closure of factories and restrictions on transport. This has resulted into steep downfall of crude oil prices. Though OPEC and Russia have agreed to cut production, it's not going to help much because there is already more stock than current demand.

US oil futures (WTI Crude Oil) turned negative for first time in history.



(Source: nasdaq.com)

Brent crude oil has dropped below \$20 (lowest in 18 years)



d) Tourism Sector -

Stringent rules of travel and ban on international travel has cut down customer footfall in all tourism places around world. Economies such as Iceland, Singapore, Thailand, etc. which are highly dependent upon tourism as their main source of revenue generation are hit hard. Many of them are struggling to provide basic necessities to their citizens. Measuring tourism losses is difficult as data changes with increase in virus spread. If pandemic continues for months, 'World Travel and Tourism Council', trade group representing major travel companies, projects a loss of 75 million jobs and \$2.1 trillion in revenue. Hotel industry and other business dependent on Tourism are also seeing plummeted revenues.

e) Aviation Sector -

Airlines are the by large worse affected by the Covid-19 and measures taken to curb it. The Domestic as well International Travel has come to Standstill because of the fear of passenger being carrier of disease. People are weary about travel. International Civil Aviation Organization, a specialized agency of United Nations has plotted an overall reduction of international passengers ranging from 44% to 80% in 2020 compared to 2019. This means approx. \$194 to 269 Billion potential loss of gross operating revenues of Airlines.



Along with this one of the main issue troubling

many Airline operators across the globe is the pressure to meet employee costs and the lease commitments as most of the airplanes are taken on lease. Due to this there is fear that many aviation sector companies may file for bankruptcy putting in danger lot of their employees and other stakeholders. In fact several airlines have already collapsed and have declared bankruptcy or suspended operations. e.g. Flybe (U.K.), Compass Airlines (U.S), Virgin Australia (Australia) to name the few. Aviation consultant CAPA has warned that 'Most' of world's airlines could be bankrupt by the end of May due to ongoing coronavirus pandemic.

f) Informal Labor -

The worst global crisis since World War II has caused unprecedented disruptions to labour markets. As per 'International Labour Organization' 436 million enterprises operate in the hardest hit sectors. Informal economy which covers more than 2 billion workers worldwide is most vulnerable to adverse effects of Novel Coronavirus. For such workers staying home means no job, no wages, no food and the vicious chain continues. Due to reduction in revenues many organisations are laying off employees resulting into higher unemployment rate. According to CMIE India's unemployment rate in April stood at 23.52% up from March's 8.74%. Also in USA economists are predicting unemployment rate of 20%, a level unseen since 1930s Great Depression.

g) Stock Markets -

Since the start of outbreak in China, global stock markets have seen great volatility due to fear of destruction of economic growth because coronavirus and inability to curtail it. In just weeks the pandemic has shaved off nearly a third of global market cap. DOW and FTSE saw their biggest quarterly drops in first three months of the year since 1987. There has been a significant increase in VIX (index tracking volatility of the market).

h) Banking Sector -

In the times of any financial crisis, Governments and Central Banks rely on Banks and NBFCs to accelerate economy through more and more credit creation to purchasing power of consumers. But due to SARS Cov-2 lending institutions are also restricting lending to general public because of fear of bad debts or 'Non Performing Assets'. To overcome this and to boost

economy Governments and Central Banks all across globe have announced stimulus packages for Banks and other Lending Institutions along with providing ease in various norms. In India, RBI has given stimulus package to various credit creating institutions such as NABARD, SIDBI amounting to ¹ 50,000 crore.

2. Social Impact -

Human Being is at large a Socialistic Animal. We like to travel around, meet people, do group gatherings etc. All this has stopped because of Novel coronavirus. Lockdowns and stringent travel restrictions has forced people to stay home. This has made us to make changes in our living style and habits. For example, we now have to conduct virtual meetings rather than physical meetings.

Lockdown has also impacted negatively in some people in way of increase in Stress, Imbalance in Mental Peace etc. This has resulted into the increase in Domestic Violence cases all across the globe. In fact UK alone has reported 700% more increase in domestic violence complaints. Divorces have also been surged in this period.

3. Environmental Impact -

Environment also could not escape from being hit by the repercussions of global pandemic of Coronavirus. Though unlike any other thing the elements of environment have seen positive changes this days. There has been significant reduction in air pollution due to decrease in Greenhouse Gases. New Delhi alone has recorded a drop of 60% in fine particulate matter, world's deadliest air pollutant. All around world it is seen that nature is enjoying the benefits of lockdown in terms reduced pollution, clear skies and rivers.

But impact is not all positive. Pandemic has posed great threat of Waste disposal, especially hazardous Bio-medical Waste in environment. Ecosystems are facing danger of encroachment and illegal harvesting. Keeping this in mind the UNCTAD (United Nations Conference on Trade And Development) has come up with 'Sustainable Trade and Environment Programme' to assist stakeholders such as governments and civilians to elaborate coronavirus adaption and resilience strategies.

World after Covid-19 -

Historically it is seen that every disaster, might that be a world war or threats before that, each

has brought mankind to think new ways of living and rebuild the world based on new practices. Likewise, ongoing coronavirus disaster has sown seed of revolution and transformation. It will bring lasting changes on social aspects, healthcare, education systems, and digital tools.

i. Improved Healthcare Sector -

We may see Digital consultancy in place of Physical checkup wherever possible. Need to have a global digital database of all patients and inter-share ability of information between the countries has strongly emerged from this pandemic. As Bill Gates said in one of his speeches we also need to have paramedical army like other armed forces to tackle such unprecedented situations. In doing all this role of multilateral organisations is very important. These organisations are also expected to undergo some changes and bring in new norms and guidelines to deal with problems like this. In case of India we may see increase in GDP sharing of Healthcare sector to improve itself and new independent body may be set up to handle such incidents in prompt and effective way.

ii. Virtual Offices -

Concept of Virtual Offices is getting lot of attention this days. Virtual Offices are similar to physical offices we have today, except for physical place of business or place for employees. But to implement it we need to change our way of conducting businesses and shift to more digital ways such as video conferencing, virtual meetings, electronic data storage, paperless functioning, digital signoffs etc. We need global collaboration to conduct businesses virtually.

iii. E-Learning -

Focus on Social Distancing has brought digital technology in every aspect of life. Many educational institutions are shifting to digital platforms for imparting knowledge. Though Traditional Schooling won't lose its importance, Digital Learning may become integral part of global education system.

iv. Digital Economy -

Digital Economy is set to become major part of Traditional Economies all around the world. With Social Distancing norms being implemented everywhere, Digital Payments and E-Commerce is seeing major hike. People are becoming open to accept digital trading platforms and app based transactions in place of physical traditional economic transactions. Governments are also trying to push Digital Economy by offering various benefits and providing necessary infrastructure. In fact some countries have gone beyond this and are in process of bringing in Digital Currency in place of Physical Currency. In April China announced country's digital currency, DCEP. This is first official Crypto Currency of any country in world.

summary -

A disaster changes the world and our view of it. Our focus shifts and matters shift. 'SARS-Cov-2' is going to have long term impact on mankind as a whole, practices we follow and world at large.

Lessons Learned -

Coronavirus outbreak has taught us many things. Following are few of them:

- Speedy and Trustworthy early warning system for the future crisis.
- Powerful Medical Care Infrastructure.
- Health Assurance.
- Creative Partnerships and Digital Economy.
- Digital Connectivity for everyone.
- Global Collaboration for virtual conduct of business.

Though the Coronavirus outbreak is heavily wrecking world at large, with past experience and right measures, we are going to emerge out of this with strong willpower and as a better world. Mother Theresa has rightly said "What you spend years building may be destroyed overnight. Build Anyway"

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Individual role in prevention of covid-19

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Abstract -

Pulmonary illness coronavirus disease 2019 (COVID-19) causes illness that are known to cause common cold to more severe diseases. In the present article detection, prevention, response and control measures are collected from online sources of information. Aim of the present paper is to help people unknown about covid-19 to save an individual health and life which will lead nation building.

Key words - COVID-19, corona virus, pandemic, sanitizer, social distance.

Introduction -

In the relatively short period of time coronavirus was identified as COVID-19. The first case of coronavirus pandemic in India was reported on 18th march 2020 at Delhi airport.

COVID-19 is a disease caused by a new strain of coronavirus. "CO" stands for Corona "VI" for virus and "D" for disease. Formerly this disease was referred as '2019 novel coronavirus' or '2019-nCoV'.

This virus can have the range of symptoms in patients' bodies, ranging from mild illness to pneumonia. Symptoms of this disease are fever, cough, sore throat and headache.

In the last 20 years several viral epidemics such as the several acute respiratory syndrome coronaviruses. The novel Coronavirus (COVID-19) cases have been confirmed in a large number of countries due to which the World Health Organization (WHO) on 11 March 2020 has characterized covid-19 as pandemic.

Clinical recovery for mild cases is approximately 2 weeks and is 3 to 6 weeks for patients with severe or critical disease.

One can recover from Coronavirus disease (COVID-19). Patients can recover and eliminate the virus from their bodies.

Total duration of quarantine period for

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coronavirus (COVID-19) is 14 days.

Covid-19 causes only mild illness at beginning. It can also make some people very ill and more severely the disease can be fatal for older people and don't wait pre-existing condition such as high blood pressure, heart problem, or diabetics to be more vulnerable.

When shall we do covid-19 test?

- If you have symptoms like flu, you can isolate yourself.
- If you infected with covid-19 you become tired for two days.
- Then on third day it converts into mild fever, throat irritation and upping.
- At the fourth day mild headache.
- At the fifth day indigestion, constipation and loose motion, headaches like symptoms appear.
- At the sixth- and seventh-day body pains increases and other symptoms reduces.
- At 8th and 9th day cough and cold increases with difficulty in breathing.
- It is a good symptom of immunity developed against covid-19, but if few symptoms remain then you should have to proceed towards Corona helpline for test of covid-19

(Professor Dr. Farokh Udawadia, Breach Candy Hospital Mumbai).

Individual Roll in prevention of Corona virus infection -

Even after lockdown is lifted, everybody individually has to take following all precautions

- 1) One must use mask.
- 2) Hand sanitization
- 3) Keep social distance
- 4) Don't go out unless it is absolutely necessary
- 5) Don't grow beard
- 6) Don't go to barber shop. Either shave

- it yourself or call a barber to your home. Let him wear mask, hand gloves and sanitize his accessories. Preferably use your own accessories like Caesar, Razor, towel.
- 7) Don't wear belt, ring, and wrist watch when you go out. These are avoidable things, your mobile has got time.
 - 8) No handkerchief, take sanitizer and tissue paper if required.
 - 9) Don't bring shoes in your home, leave them outside.
 - 10) Clean your hands and legs when you come back home.
 - 11) When you feel you have come closer to suspected patient then take a full body wash.
 - 12) Make home more sanitized.
 - 13) Practical social distancing- avoid gathering such as Mela, religious and social functions, protests, exhibitions. Maintain safe distance at least of 2 meters.
 - 14) Patient of heart, lung disease or diabetic are said to be at higher risk.
 - 15) Avoid contact between people who are in close contact with one another.
 - 16) Respiratory droplets produce when an infected person coughs, sneezes or talks.
 - 17) Not only chewing tobacco but also spitting on road or in public places can severely spread this pandemic.

We must look after at least these above things to get rid of COVID-19.

Safety and Control measures of COVID-19 -

- 1) Droplets can land in the mouth, nose or face of people who are in the vicinity of COVID-19 patient. These droplets may possibly be inhaled into the lungs.
- 2) wash your hands with soap and water for at least 20 seconds especially after you have been in a public place or after blowing your nose, coughing or sneezing.
- 3) use hand sanitizer that contain at least 60% alcohol.
- 4) avoid touching your eyes, nose and mouth with unwashed hands.
- 5) avoid close contact with people who are

- sick. Maintain 6 feet distance between the persons who are sick.
- 6) Keep social distance between yourself and other people outside of your home.
 - 7) Do not gather in groups.
 - 8) Stay out of crowded places and avoid mass gathering.
 - 9) keep distance from other is especially important for people who are at higher risk of getting very sick.
 - 10) cover your mouth and nose with a mask or face cover when around other people.
 - 11) you may spread covid-19 to others even if you do not feel sick.
 - 12) everyone should wear a cloth face cover when they have to go out in public.
 - 13) The face mask or cloth face cover is useful to protect other people in case you were infected.
 - 14) You do not need to use a face mask meant for a healthcare worker like N-95.
 - 15) face mask is not substitute for social distancing.
 - 16) if you are in a private meeting and do not have your face mask covering then remember always to cover your mouth and nose with tissue paper or when you cough or sneeze, use the inner side of your elbow.
 - 17) throw used tissue in the trash.
 - 18) Immediately and frequently wash your hands with soap and water for at least 20 second.
 - 19) Clean and disinfect frequently touched surfaces daily. This includes door knobs, lamp switches, countertops, table tops, handles of desk, phone, toilet fixtures and sinks, etc.
 - 20) If surfaces are dirty, clean them, use detergent or soap water prior to disinfection.
 - 21) There is currently no licensed drug for the treatment of COVID-19 or prevention from COVID-19.
 - 22) Take black tea, herbal tea, hot water, hot air fumes, these are the basic measures to avoid infection
 - 23) Stay at home. You should only leave your

- home in an emergency.
- 24) Avoid communal sleeping areas which are crowded places. Do not shake hands or do not keep close contacts with other peoples.
 - 25) If you have a garden or balcony, spend time there.
 - 26) Travel to work if and only if you offer an essential service. Never forget to follow social distance.
 - 27) Do not ignore or delay in seeking medical treatment for abnormal health indications or symptoms that you may be experiencing.
 - 28) Keep yourself mobile by physical exercising or moving as much as possible.
 - 29) Ask neighbours family or friends to get any shopping or medicine until do not go out for shopping.
 - 30) Manage food and medicine home deliveries to be left outside of your doors.
 - 31) Do not call visitors or arrange any physical meetings. Online meetings are the best alternatives.
 - 32) Practice for good hygiene and proper hand washing.
 - 33) Put used tissue papers into a dustbin and wash your hands.
 - 34) Clean and disinfect frequently touched objects and surfaces.
 - 35) Do not touch your eyes, nose and mouth if hands are not clean.
 - 36) Use alcohol-based hand wash frequently.
 - 37) Do not share objects that are used by others for example bottles, cups, glass, dishes, etc.

All above safety and control measures are collected from Google references listed at the end of this article.

How to increase our immunity -

Continuously living in the hormones of stress, fear and anxiety will just invite more diseases. So, we must increase our immunity by boosting selected foods and exercising yoga, pranayama. Some commonly used foods are helpful to avoid the infections like COVID-19.

1. Drumsticks - it is one of the super foods which helps in boosting our immunity and acts as a

shield for any virus to grow.

2. Coconut water with lemon - take fresh coconut water with half a lemon, it gives vitamin c to increase immunity.

3. Garlic, onion and turmeric - natural super food that will help kill the bad microbial infections.

4. Pumpkin seeds - just having 3-4 spoons of pumpkin seeds everyday can provide fats, magnesium and zinc which are vital for immune functions.

5. Red Capsicum - vitamin c present in red capsicum, is three times higher than that of an orange.

6. Avoid stress - stress, fear and anxieties weakens our immune system. So, we must avoid stress which directly impact on our immune system.

7. Do pranayama - to be active, practicing yoga or brisk walking will always help. In particular, pranayama works best in strengthening our respiratory system.

8. Take proper rest - good quality of sleep every night recharges our human immune system.

9. Practice to express gratitude and love - will keep your thoughts healthy and consequently strengthen the immunity.

10. Maintain hygiene - wash your hands at regular intervals, make this habit in every 3-4 hours wash your hands for 10 to 20 seconds thoroughly.

11. Cooked food - restrict the number of cooked meals to only twice a day (lunch and dinner), eat more raw vegetables and fruits meanwhile.

12. Empty stomach fruits - empty stomach fruits are highly recommended for making the system alkaline and building good health.

13. Cucumber and carrot - take for lunch and dinner every day making our body alkaline.

14. Water - at least 2 litres of water every day. Drinking sufficient water will not only help flush out toxins but maintain a healthy fluid balance.

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Challenges for rural areas about health awareness after Covid-19, A Review

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Abstract -

The ongoing health crisis around Covid-19 has affected all walks of life. Protecting lines of people suffering from the disease as well as front line health responders have been the priority of the nation. India declared a three week nation lock down till mid-April in the initial phase. In this contrast there should be some pre-ventions of safe practices in the community for rural areas.

Key words - Covid-19, safe, lock down, health awareness, prevention.

Introduction -

India has more than fifty percent population stays in the rural areas. For them safely managed water, hygiene, and sanitation services which are essential part of preventing and protecting human health during infections disease out breaks. One of the most cost-effective strategies for increasing pandemic preparedness, especially in resource-constrained settings, is investing in core public health infrastructure, including water and sanitation systems. Good WASH and waste management practices, that are consistently applied, serve as barriers to human-to-human transmission of the COVID-19 virus in homes, communities, health care, and facilities for schools, colleges, and rural sectors.

Safely managed WASH services- are also critical during the recovery phase of a disease outbreak to mitigate secondary impacts on community livelihoods and wellbeing. These secondary impacts—which could include disruptions to supply chains, inability to pay bills, or panic-buying-have negative impacts on the continuity and quality of water and sanitation services, the ability of affected households to access and pay for WASH services and products (for instance, soap, point of use water treatment or menstrual hygiene products) and the ability of

schools, workplaces and other public spaces to maintain effective hygiene protocols when they re-open. If not managed, secondary impacts can increase the risk of further spreading waterborne diseases, including potential disease outbreaks such as cholera, particularly where the disease is endemic.

According to a WHO/UNICEF technical brief on WASH and waste management for COVID-19 -

- Frequent and proper hand hygiene is one of the most important measures that can be used to prevent infection with the COVID-19 virus. WASH services should enable more frequent and regular hand hygiene by improving facilities and using proven behavior change techniques.
- WHO guidance on the safe management of drinking water and sanitation services applies to the COVID-19 outbreak. Measures that go above and beyond these recommendations are not needed.
- Many co-benefits will be realized by safely managing WASH services and applying good hygiene practices. Such efforts will prevent other infectious diseases, which cause millions of deaths each year.

Safe WASH services in health care facilities (HCFs) to deliver quality health services; protect patients, health workers, and staff; and to prevent further transmission. The WASH in Health Care Facilities Global Baseline Report (JMP, 2019) highlighted that one in four HCFs lacks basic water service (affecting more than 900 million people), one in five HCFs has no sanitation service (affecting about 1.5 billion people), and one in six HCFs has no hygiene service. During an infectious disease outbreak, services should meet minimum quality

standards and should be separated for infected vs. non-infected patients. Support should ensure services are not disrupted and products such as soap and alcohol-based hand rubs are available. These services should also be available in temporary HCFs and quarantine sites.

Improving hand washing behavior, food hygiene, and safe water practices. Materials for hand washing and hygiene may include provision of fixed and portable hand washing facilities, purchase of soap and alcohol-based hand rubs, provision of water supplies for hand washing, and point of use water treatment. Schools, workplaces, markets, transport stations, and other areas where people gather all require easy access to hand washing facilities and water and soap for hand washing. Proven behavior change techniques can help increase the frequency and improve the practice of critical hygiene behaviors. Resources such as the Global Handwashing Partnership can be tapped to mobilize private, public, and civil society actors to support developing messaging and materials to respond to COVID-19 outbreaks in country.

**Response and containment measures -
What are we going to learn-?**

1. Role of front line worker plays to understand about Covid-19
2. Information to the community talks about information and knowledge, on hand washing, cough, hygiene, social distancing, etc.
3. Community surveillance - In this discussing about contact tracing protocol, what are guidelines for people who are suspected, symptomatic or asymptomatic cases?

4. Stigma and discrimination - these deals with myths and misconceptions around corona virus.
5. Supportive public health services community - Role of community networks in the community services required, homecare, home quarantine in rural areas.
6. Personal safety - Front line workers will work to reach out the message to thousands of directly or indirectly affected community members.

Conclusion -

After lockdown there are some precaution taken by rural community

- 1) Wash hands with soap with water for 20 sec.,
- 2) Use hand sanitizer (70% alcohol)
- 3) Do use handkerchief or tissue to cover face.
- 4) Use masks.,
- 5) Social distancing at least one meter between yourself and another person.,
- 6) Take care of older adults, people who have underlying medical conditions, pregnant women.

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The COVID-19 and Education System: Impact And Strategy

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Abstract -

Due to COVID-19 and lockdown situation various sectors of India like agriculture, textile, automobiles, aviation, retail, telecom, etc. are badly affected. The education sector is the central backbone of Indian economy and development, now facing an unprecedented crisis due to Corona Virus Disease (Covid-19). Next to China Indian education system, which is the most diverse and largest in the world with 1.3 million schools, 39931 colleges, 993 universities and 10725 Stand alone institutions as per report of the Ministry of Human Resource Development, Government of India. The outbreak of Coronavirus has advised us that change is inevitable. Quick major actions are essential to ensure continuity of learning in education sectors. The present study is aimed to find out the impact of coronavirus on education system in India and strategies to mitigate its negative impacts.

Keywords - Lockdown, Corona Virus Disease (Covid-19), Higher education, Strategy.

Introduction -

The COVID-19 is pandemic, so many countries have decided to close schools, colleges and universities to reduce contact, stop spreading of novel corona virus and save lives. There is no certainty when schools and colleges will reopen. One of the first measures taken by the Indian government was to close the educational institutions for the safety of students, teachers, and their families. No doubt, the steps were taken by the government were necessary and brought in the right direction to stop the further spread of the virus in the country. Social distancing and severe lockdowns across the globe has forced students to find innovative ways to do their education and study. According to UNICEF (United Nations International Children's Emergency Fund) monitoring, 186 countries are currently implementing nationwide closures and 8 are

implementing local closures, impacting about 98.5 percent of the world's student population (UNESCO, 2020).



Map showing World countries lockdown(Education)

On 16 March, India declared a countrywide lock-down of schools and colleges. The global closedown of educational institutes is going to cause major interruption in learning of around 600 million students across the world. Mandatory school closures and other social distancing measures were associated with a 29% to 37% reduction in influenza transmission rates (NIH, US, 2011). This is challenging time for educational fields such as school, colleges and universities to conduct board examinations, competitive examinations, various entrance test, term end examinations, etc. During lockdown period students are attending regular online classes and completing assignments and preparing for online exams at home. Students have fewer opportunities for learning at home, and their time out of school may present economic burdens for parents. According to Bjorklund and Salvanes (2011), families and parents play a major important role into a child's learning, but this role is complementary to teachers and it is less effective. According to the Organization for Economic Co-operation and Development (OECD) studies, school performance hinges critically on maintaining close relationships with teachers. This is particularly true for students from disadvantaged backgrounds, who may not have the parental support needed to learn on their own. During the 1918-1919 influenza pandemic in the United States, school closures and public gathering bans

were associated with lower total mortality rates (Barnum, 2020). School closures were shown to reduce morbidity from the Asian flu by 90% during the 1957–58 outbreak (Chin TD et al., 1960) and up to 50% in controlling influenza in the US, 2004–2008 (Wheeler CC et al., 2010).



Fig: A Cyclical Approach to education in Lockdown

Many countries are now preparing and planning for recovery. This crisis is an opportunity to introduce new learning modes that can reach everyone, to prepare for emergencies, and to make the system more resilient. So the multi-pronged strategy is necessary to overcome the crisis and build a resilient Indian education system.

Result and Discussion -

To find out the problems we have communicated online with many students those are enrolled in education system and preparing for exams of various courses at home. By performing this survey we have observed that the students, in addition to the missed opportunities for learning, no longer have access to healthy meals during this time and are subject to economic and social stress. Nutrition plays a critical role in cognitive development and academic performance for children (American University Washington College of Law, 2020). Many children worldwide rely on free or discounted meals at schools. When schools close, nutrition is especially compromised for children in schools where food is provided. Recent graduate may have fear in their minds of withdrawal of job offers from the corporate sector due to the current situation. Schools are also hubs of social activity and human interaction and when schools are closed, many children and youth miss out of on social contact that is essential to learning and development. Students seeking to take admission in 2020 are currently clueless concerning how and where they ought to apply to colleges from here on. The Centre for Monitoring Indian Economy's estimates on unemployment shot up from 8.4% in mid-March to 23% in early April and the urban unemployment rate to 30.9%.

Strategies to overcome this crisis -

- **Need of Resources** - Schools and

colleges need resources to rebuild the loss in learning, once they will open again.

- The **DIKSHA** platform useful for teachers, students and parents. By using this platform teachers can make lesson plans, worksheets and activities to create enjoyable classroom experiences. It will be better to understand concepts, revise lessons and do practice exercises for students. Parents can follow classroom activities and clear doubts outside school hours.
- In this time of crisis, a well-rounded and effective Indian Traditional courses like yoga, Indian medicines, architecture, sports and agriculture should be integrated with current syllabus for its scientific innovations, values, and benefits to develop skills, knowledge, employability, productivity, sustainable technologies and physical as well as mental health.
- **Distance learning** - Online learning has become a critical lifeline for education. Technology can enable teachers and students to access specialized materials well beyond textbooks, in multiple formats and in ways that can bridge time and space (Murphy and Michael P. A., 2020). In response to the pandemic, many schools moved to online distance learning via platforms like Zoom. The OECD has created framework to guide an education response to the COVID-19 Pandemic for distance learning.
- **Equal access to educational resources** - For students and teachers the International Council for Open and Distance Education issued a special website to provide webinars and tips for online teaching.
- **Special Educational Fund** - The special fund is needed to recover from this crisis and for digitalization of institutes to teachers and students.
- **Use of different tools** - Video lessons, MOOCs, TV and Radios provide knowledge from different sources at

- home directly.
- **Cleaning and Sanitization of premises** - To prevent infection from social community it is mandatory to clean and sanitize the premises of school and colleges before colleges will reopen.
 - Student counseling-To create awareness about study and regular school and colleges after long breakdown is necessary.
 - **Online virtual classes** - Universities and Higher Education Institutions (HEIs) have instantly turned to conducting virtual classes, online assignment submissions and teacher-student interactions. Classes at schools, colleges and universities are now being conducted online.
 - **Framing of academic calendar** - To recover the time loss it is useful to frame a specific schedule for upcoming academic year.
 - **Online admission processes** - To ensure the safety of prospective students, parents and their staff, admission process should be conducted online.
 - **Redesign/Reframing of syllabus** - Finalize the length of various courses and programs to be conducted through online platforms.
 - **Setting up digital labs** - It is of utmost importance for teaching courses like science, medicine and engineering.
 - **Encouragement And Training For Faculty Members To Adopt Virtual Instruction Skills** - It is just because someone is an excellent classroom teacher does not automatically make him/her an excellent online educator.

Conclusion -

On the basis of feedback and opinions of students, various online resources and news we came to the conclusion that this current lockdown situation will make conversion of old traditional chalk-talk method into new e-learning method. Short term or temporary lockdown will carry long-term social and economical crisis. It is also possible

that some student's careers might benefit from the interruptions. Maybe some faculties and employees may face salary cuts, bonuses and increments can also be postponed. If the situation persists, a decline in the demand for international higher education is expected as well as employment rate. Rapid increase of mobile Internet users in India can enhance the impression of teaching, learning and educational network. Even if some institutes in urban India manage online classes, we don't have the technology for interactive learning across the country, especially in rural India where resources are limited. It seems that listeners are less active during online sessions and are more distracted with their surroundings. Both can coexist but cannot survive long in isolation. Regular School and colleges improve social skills, social awareness, ability and curiosity about knowledge, but because of this lockdown condition students are fluctuating from these things. Students are playing indoor games instead of the outdoor games so they are facing health crisis because of less muscular activities. Ultimately it leads to the loss of mental health of students.

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Autovaccination : A Simple solution to present pandemic

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Our Hypothesis : Autourine drops - the probable autovaccine for COVID-19.

Urine is a plasma ultrafiltrate. It is a blood product just like any other blood product. It isn't a waste product. It is the excess product secreted by your kidneys, which isn't required by your body at the particular point of time. The main function of kidneys is to regulate/restore water and electrolytes balance. They keep all biofactors/biomolecules in your body at the optimum concentrations.

Besides, urine contains a lot of ingredients/components of immunological importance. It contains an excess of antibodies produced by your body's humoral immune response. It also contains a number of antigens/antigenic fragments and nanosized particles which have been introduced in your body by known as well as unknown invaders including bacteria, fungi, viruses and allergens.

These antigens/antigenic fragments and nanoparticles, when reintroduced in your blood stream by sublingual or parenteral route, initiates the perfect immune response (cell mediated and/or humoral immune response) capable of fighting the potential threat.

This is the science behind our Hypothesis : Autourine drops- the probable autovaccine for COVID-19.

Procedure - Take a sterile glass bottle of 15 ml capacity with dropper. Collect early morning midstream sample of autourine in the glass bottle. Instill 3 to 4 drops of autourine, collected as above, sublingually half an hour before taking any food/drink. Repeat the process 3 to 4 times daily. Continue the instillation of autourine drops sublingually for 7 to 28 days depending upon the severity of illness or as per your requirement. Either use fresh urine every time or use early morning midstream sample for the whole day.

Indications -

- A person of any age group living in high risk area/zone (where collection of autourine is possible) can follow the procedure.
- A person suffering from any type of flu, influenza like illness (ILI) or swine flu can take the autourine drops sublingually.
- A person suffering from infection of rhinoviruses or coronaviruses including novel coronavirus (SARS CoV-2) can follow the procedure and take maximum advantage of it.
- Any apparently healthy individual not suffering from any illness/syndrome can take autourine drops sublingually as a prophylactic measure.

Contraindications -

- A person suffering from glomerulonephritis, pyelonephritis, cystitis and urethritis or having renal calculi and malignant lesion of urinary tract or showing symptoms of proteinuria, haematuria and pyuria should avoid the procedure till symptoms or illness subsides.
- A person suffering from RTI/STI should avoid the procedure.
- Women of reproductive age group should avoid the procedure during their menstrual periods.
- A person having personal, social or religious taboos/stigma related to the use of autourine drops should avoid the procedure.

Potential benefits - You will get maximum protection against known or unknown invaders/pathogens you were exposed to, during your lifetime. This is the probable autovaccine during

today's global pandemic : COVID-19.This is the best cost effective measure to protect humanity. A service to humanity is service to GOD.

You can send your response to us by filling feedback form through Google form on the following link: <https://forms.gle/eRxLLqYbD1EHstYD8>

Disclaimer - This article is for the purpose of health information only . This article is NOT

intended to diagnose, prevent or treat COVID-19.

This article is NOT intended to replace the advice and/or treatment of medical professionals or experts.

Note - Public is advised to follow the guidelines issued by WHO,central or national,state and local government authority regarding present pandemic : COVID-19.

Role of an Individual in Prevention of Corona Virus

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Introduction -

“ Prevention is better than cure”

Most of countries face COVID19 infection, so WHO declares it as pandemic. Corona virus COVID19 outbreak worldwide changes the life of an individual. Almost all the countries adopt to lock down the whole country to avoid and break the chain of covid19 virus. Whole world is not allowing the people to travel in and outside the country, because travel from one place to another accelerates the chances of spreading covid 19virus. Indian government also adopts the lock down method to control the covid 19 virus to spread. It works very well and the number of infected persons and casualties are less in number as predicted by experts.

What is corona virus?

A corona virus is a kind of common virus that causes an infection in your nose, sinuses, or upper throat.

What is COVID19?

Covid19 is an acute infectious respiratory disease caused by a newly discovered corona viruses. It can affect your upper respiratory tract or lower respiratory tract. It is caused by a corona virus name SARS-cov-2. It spread the same way as other corona viruses do, mainly through person to person contact. Infection ranges from mild to serious.

In early 2020, after a December 2019 outbreaks in China, the world health organization identified SARS-cov-2 as a new type of corona virus. The outbreak quickly spread around the world.

Anyone can get COVID19 and most infections are usually mild especially in children and young adults. People over age 65 are most likely to get a serious illness. Every case is different and recovery rate is 97-99%. The person having any disease history or health problems as high blood

pressure, heart disease, lung disease, asthma, kidney disease that need dialysis, obesity, diabetes, cancer treatment especially chemotherapy, liver disease, cigarette smoking are more susceptible to COVID19.

A swab test can only tell whether you have the virus in your body but an antibody test can show whether you have ever been exposed to the virus if you didn't have symptoms. There is no any home test kit for COVID19.

Symptoms of COVID19 -

- Fever
- Coughing
- Shortness of breathe
- Chills, sometimes with shaking
- Body aches
- Headache
- Sore throat
- Loss of smell or taste
- Nausea
- Diarrhea
- Bluing of lips

The virus can lead to Pneumonia, respiratory failure, septic shock and death.

How corona virus spread?

Corona virus is mainly spread from person to person. This can happen between people who are in close contact with one another. Droplets that are produced when an infected individual coughs or sneezes may lands in the mouth or noses of people who are nearby or possibly be inhaled in to their lungs.

A person infected with corona virus- even one with no symptoms- may emit aerosols when they talk or breathe. Aerosols are infectious virus particles that can float or drift around in the air for up to three hours. Another person can breathe in these aerosols and become infected with the corona virus. Corona virus can also spread from contact with infected surfaces or objects.

Study shows that SARS COV-2 can last for several hours on various surfaces.

Copper -- 4 Hours

Cardboard -- Up to 20 Hours

Plastic/ Stainless steel -- 2 to 3 days

Clothes -- 24 Hours

That's why it is important to disinfect the surfaces to get rid of the virus.

Recent studies have shown that covid – 19 virus can remain on the surface or object for up to 72 hrs. This means virus on the surface of groceries will become inactivated over time after groceries are put away.

Fruits and vegetables should be thoroughly rinsed with water before consuming. Wash your hands before consuming any food that you have recently brought from the grocery store. If you are older than 65 yrs then avoid or limit trips to grocery shops. Ask your grocery shopkeeper to deliver grocery to your home.

To avoid to get contaminated limit contact with people outside your family, if it is emergency go out then try to stay at least six feet away from others and wash your hands thoroughly after the trip. Prepare your own food as much as possible; avoid parties, having friends or family over for meal, going to coffee shops.

Do yoga exercise at home, avoid gym right now. Keep in touch virtually through phone calls, Skype, video call and other social media. Enjoy leisurely chat with an old friend, you have been meaning to all. Go to bed early and get some extra sleep.

Anyone who has fever and respiratory symptoms should not fly or travel of at all possible.

There is no vaccine available, although scientists will be testing on a vaccine very soon. However, it may be a year or more before we even know if we have a vaccine that work.

If once a person recovered from corona virus develops short term immunity and over the time passes, diminishes the immunity and still be susceptible to a different corona virus infection. At present there is no evidence that pets such as dogs or cats can spread covid-19 to human however pets can spread other infections that cause illness, so wash your hands with soap and water after interacting with pets.

To avoid corona virus infection, individual should

have strong immunity.

To improve immunity one should

- Don't smoke.
- Eat diet high in fruits, vegetables and whole grains.
- Take multivitamin if you suspect that you may not be getting all the nutrients you need through your diet.
- Exercise regularly.
- Maintain a healthy weight.
- Control your stress level.
- If you drink alcohol, drink moderately not more than one or two drinks.
- Get enough sleep.
- Take steps to avoid infection such as wash your hands frequently and trying not to touch your hands to your face, since harmful germs can enters through your eyes, nose and mouth.
- Clean and disinfect the home.
- Avoid going to crowded places.
- Better stay home and stay safe.

Main thing to not gossip or entertain rumors about covid-19 just follow and look into WHO advisories and government directives.

How to prevent ourselves from corona virus?

As there is not any vaccine or exact treatment so each and every individual should take care of themselves to avoid to get contaminated. By living in homes in lock down period is the need of time. One can very well support to break the chain of covid 19 by staying at home and staying safe. Government of Maharashtra is trying to minimize the numbers of corona patients, for that, mich maza rakshak means myself is protector of me movement is widely seen in Maharashtra. To prevent to get contaminated every individual should follow the directives of government.

Social and physical distancing refers to actions taken to stop or slow down the spread of a contagious disease. For an individual, it refers to maintaining enough distance i.e. 6 feet in between two persons.

- Avoid going to crowded places
- Medication
- Follow the medical prescription prescribed by the medical practioner.
- Keep the patient under observation.

As individual scares to buy vegetables, fruits and groceries, because covid-19 can be transmitted through these things., still there is no current evidence that covid-19 virus can transmitted through food, But safety precautions will help you avoid breathing in corona virus or touching a contaminated surfaces and touching your face.

In the grocery shops also maintain at least six feet of distance between yourself and other shoppers. Wipe frequently touched surfaces like grocery carts or basket handles with disinfectant wipes. Avoid touching your face. Wearing cloth

mask helps remind you not to touch your face and can further help reduce spread of the virus. Use hand sanitizer before leaving the store. Wash your hands as soon as you get home.

Everyone is in lock down so don't get panic what will happen and when it will be ended. It is better to counsel self that these days will be gone and definitely there will be hope of new sun rise.

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Role of Police and Defence in Prevention of Covid-19

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Introduction -

As we know that whole world is fighting against corona virus. This virus is spreading rapidly throughout the world. Corona viruses are single-stranded RNA viruses, about 120 nanometers in diameter. They are susceptible to mutation and recombination and are therefore highly diverse. There are about 40 different varieties and they mainly infect human and non-human mammals and birds. They reside in bats and wild birds, and can spread to other animals and hence to humans. The virus that causes COVID-19 is thought to have originated in bats and then spread to snakes and pangolins and hence to humans, perhaps by contamination of meat from wild animals, as sold in China's meat markets. In order to control the spread of this virus our government declared lockdown. By this time of lockdown, our Doctors, Police and army are still on their duties in order to protect or save the people of their country.

Purpose of study -

To realize the efforts done by police and army in order to prevent the spread of covid-19. Even in the period of lockdown without worrying about their life and family, they are working for the country. Main view of publishing this paper to highlight the efforts or work done by police and army against covid-19 in front of the society.

Research Methodology -

This research paper is basically descriptive and analytical. In this paper attempt has been taken to analyze the importance of the work done by police and army in prevention of covid-19. The data used in it is purely from secondary sources and websites according to the need of this study.

Role of Police and Defence in Prevention of COVID-19 -

MCO represents a strategy rooted in public health principle and law that emphasizes the protection of the community's health and wellbeing.

-NSTP/ASYRAF HAMZAH THE Movement Control Order/ (MCO) has been implemented in Malaysia to curb the Covid-19 outbreak since March 18. Despite the devastating spread of the communicable disease, not everyone agrees / that what the government is doing is right. Some have painted it as a national emergency, a starting point for the negative premise of emergency law's imposition which is synonymous with military rule. First though, Covid-19 is a global crisis that threatens public health and safety, constituting the term of "disaster" under Article 4, Malaysian National Security Council Directive 20. There were more than 1,000 cases and it claimed the lives of more than 10 people in less than two months. The pandemic has hastened the urgency to adopt vigorous responses but the government did not undertake aggressive options like declaring a state of emergency. MCO represents a strategy rooted in public health principle and law that emphasizes the protection of the community's health and wellbeing. The government's actions are based on Prevention and Control of Infectious Diseases (Measures within the Infected Local Areas) Regulations 2020 under the auspices of Prevention and Control of Infectious/ Diseases Act 1988. The Malaysian armed forces participation nationwide, starting from March 22, 2020, is to play a contributory role in national intervention in tackling Covid-19. By virtue of Section 5 of the Prevention and Control of Infectious/ Diseases Act 1988, the Health Ministry, as the main authority in charge, can call forth aid from any agency to enforce the said law and regulations. The Federal Constitution and Armed Forces Act 1972 designate the military with responsibilities of maintaining / law, / order / and public / safety. Military branches may hence be called upon to handle domestic disasters including riots, floods and episodic pollution. In similar vein, a whole spectrum of military resources comprising

logistics, infrastructure, medics, transportation, intelligence and communications could be mobilised to support the Health Ministry in responding to Covid-19 developments. Notably, the military has limited powers during such a period. It is tasked to merely help the Health Ministry. To add, unless a “safety emergency” proclamation is issued by Yang Di-Pertuan Agong in congruity to Article 150 of the Federal Constitution, the military does not gain actual powers to take over the country’s administration and to impose military rule. Further, unless “disaster emergency” or “a security area” is declared by the prime minister, based on Section 18 of the National Security Council Act 2016 and Article 25 of the Malaysia National Security Council Directive 20, the military is not empowered to arrest, seize and search. Overall, Malaysians should avoid any prejudice about the MCO. Enhance our support to the “dark blue” and “green” forces. They are not about stripping our rights to due process but they serve as a catalyst for the country’s fight against Covid-19.

ARMED FORCES: Dedicated COVID-19 facilities including High Dependency Units, Intensive Care Unit beds are being prepared in 51 hospitals of the Armed Forces across the country. Five viral testing labs at Armed Forces hospitals made part of national grid. Six more hospitals are being equipped shortly with the resources to begin COVID-19 testing. Armed Forces Medical Services (AFMS) earmarked 28 Service Hospitals as COVID hospitals for managing purely Corona virus cases. This will include Armed Forces as well as civilian patients transferred from state health authorities, in case their capacity is overwhelmed. DRDO developed a bio suit to keep the medical, paramedical and other personnel to manage & evacuate the casualties in the event of radiological emergencies. Each suit costs Rs 7,000. Developed Portable Backpack Area Sanitisation Equipment and Trolley Mounted Large Area Sanitisation Equipment for effective sanitisation of public spaces. Developed In-house hand sanitiser and provided nearly 73,000 litres to Indian Armed forces, Armed Forces Medical Corps, Defence Security Corps, MoD, Parliament, and to various security establishments and high offices. The cost of sanitiser is less than Rs 12/ litre (including GST). Provided 20,000 three ply

masks to Delhi Police. Innovation on to create ‘Multi patient ventilator’ wherein several patient can be supported by a single ventilator. Around 5,000 ventilators will be produced in the first month and 10,000 subsequently. Developed Five layer N99 masks with two layers of nano mesh with Capacity to make 10,000 N99 masks per day. Developed Body Suits for medical & paramedical staff. Society for Biomedical Technology (SBMT) - A DRDO funded and managed initiative & DEBEL, Bangalore have developed a ventilator and technology is transferred to Industry. Defence PSU, M/s BEL has joined the efforts for large scale production of ventilators. DEBEL, Bangalore has undertaken the initiative to develop the critical components of the ventilators which are not available in the country. These will be produced with the help of industry. Two laboratories of DRDO are ready to function as test centers for detection of Covid19. Once approved, these laboratories can undertake 700 tests per day.

International Cooperation: Six naval ships are kept ready for assistance to neighbouring countries. Five medical teams are also on standby for deployment in Maldives, Sri Lanka, Bangladesh, Nepal, Bhutan and Afghanistan. Special flights of Indian Air Force evacuated people and carried medical supplies. A C-17 Globemaster III comprising of crew, medical team and support staff has carried 15 tonnes of medical supplies to China and airlifted 125 persons on its return. The C-17 Globemaster III made another journey, this time to Iran and brought back 58 stranded Indians. The aircraft also brought 529 samples for COVID-19 investigation. The C-130J Super Hercules aircraft has ferried around 6.2 tonnes of medicines to Maldives. An Army Medical Corps team consisted of five doctors, two nursing officers and seven paramedics was deployed in Maldives for capacity building measures and assist in setting up their own testing, treatment and quarantine facilities between March 13-21, 2020.

Conclusion -

Due to the work done by the police and army during the period of covid-19, the spread of the corona virus is in control. Work done by the police and army not only controlled the spread of disease but also saved the life of many people by applying the strict rules like maintaining the social distance,

not allowing the group of people to stay at one place, making people to stay at home, etc... So, They played an important role in preventing the spread of covid-19.

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Covid-19 Pandemic Prevention in Schools and Caregivers

More B. C.

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Abstract -

COVID-19 is a zoonotic disease. Outbreak of COVID-19 has been declared as a pandemic by WHO and the virus has now spread across many countries and territories. To reduce the impact of the outbreak and support for control measures, many countries choose to lockdown the nation from 2/3 months. Some countries started to open the lockdown partially. As per as schools and colleges are concerned, to protect students, teachers, caregivers some precautions and extra facilities are necessary i.e. keeping social distancing to provide hand wash/ sanitizer, unnecessary touching, facilities like e-learning, prohibition of unnecessary gatherings. So that we can protect the young students to whom we address global citizens. All these measures must be useful to diminish the students' fear and anxieties about COVID-19.

Keywords - COVID-19, pandemic, lockdown, students, prevention, schools, colleges, etc.

Introduction -

The majority of human infectious diseases and Pandemic are originated through the cross species transmission of microorganisms from animal to humans, overwhelmingly in the Old World (Jane, K. E. et al., 2008; Taylor, L. H. and Latham, S. M. 2001, Wolfe, N. D. et al., 2007). However, most of the animal pathogens are not readily transmitted to humans (Antia, R. et al., 2003). The process of cross species transmission is not fully understood. To become successful human pathogen an animal pathogen must evolve into a pathogen capable of not only infecting humans, but maintaining long term human to human transmission without the need for reintroduction from the original animal host. This process can be categorised into stages (Wolfe et al., 2007).

Stage1 - Involves animal microbes that are not present in humans under natural conditions,

when a pathogen evolves, it can be transmitted to a human under natural condition, it has entered.

Stage 2 - Transmission from stage 2 into stage 3 is defined by secondary transmission between humans.

Stage 3 - Includes pathogens that undergo only few cycles of secondary transmission between human whereas,

Stage 4 - Includes disease that exist in animals but which undergo long sequences of secondary human to human transmission without involvement of animal hosts.

Stage 5 - Represents diseases that are exclusive to humans. History's most troublesome disease is in stage 5. (Wolfe et al., 2007)

As we increase our interactions with animals through hunting, the trading of animal foods, animal husbandry practice, wet market and domestications of animals, the probability of infection transmission dramatically increases. It is now accepted that the hunting of nonhuman primates in the early 20th century led to the introduction of simian immunodeficiency virus into the human population, giving modern HIV pandemic. (Worobey et al., 2008)

The SARS outbreak originated from the bat of the genus *Rhinolophus* and its human emergence is believed to have been facilitated through intermediate hosts in the wet markets of Southern China (Webster, R. G., 2007) and (Wan, L. F. and Eaton, B. T., 2007). The species of animal that harbour the pathogen, the nature of human interaction with that and the frequency of these interactions modulate the risk of zoonotic transmission (Wolfe, N. D., 2007). The success of a pathogen depends on its ability to spread from human to human and susceptible to human population, our ability to cross continents in a single day poses a unique new challenge to emerging infection disease control. Past research has

highlighted the importance of global travel to the spread of pandemic disease (Germann, T. C., 2006). Recently, global spread of H1N1 viruses illustrate how our global interconnectedness can affect the worldwide distribution of new viruses, otherwise have remained a regional phenomenon in an era before global transit.

Therefore, this is new and argues in favour of developing a system detecting pathogenic agents from animal to humans and identifying ways by which we can diminish the risk of transmission especially in the population that are highly connected with animals or zoonotic agents. The importance of the human-animal interface to the disease emergence process and offer suggestions that may serve as prevention strategies, such as social, mobilization, public health education, behavioural changes, communication strategies, because there is no global surveillance system to monitor zoonotic disease emergence (Brain, L. Pike., et al., 2010).

About COVID-19: The outbreak of coronavirus disease (COVID-19) has been declared as a Public Health Emergency of international concern and the virus that causes COVID-19. This infection is caused by a new strain of coronavirus. 'CO' stands for corona, 'VI' stands for virus, and 'D' for disease. Formerly, this disease was referred to as "2019 novel coronavirus" or "2019- n CoV", symptoms include fever, cough, and shortness of breath. In severe cases this virus can cause pneumonia. The virus is transmitted through direct contact with respiratory droplets of an infected person, individuals can also be infected by touching the surfaces. The COVID-19 virus may survive on surfaces for several hours, but simple disinfectants can kill it. Older people and people with chronic medical conditions appears to be more at risk of developing severe symptoms. The virus can be fatal in rare cases. There is no currently available vaccine for this disease, the treatment is symptomatic. As with other respiratory infections like flu this disease can be prevented that includes: Staying at home when sick, washing hands often with soap and water, and cleaning frequently touched surface and objects (UNICEF).

Aim and Objectives -

The protection of children/ students and providing educational facilities is very important. Precautions are necessary to prevent the spread

of COVID-19. Children and young students are global citizens. In this crisis they help them to learn about building a safer and more caring community. Facts about COVID-19 will help them diminish students' fear and anxieties. Guidance provides messages to school administrators, teachers, staff, parents, caregivers and community members as well as students themselves in promoting safe and healthy schools/colleges.

Method -

The reopening of schools/colleges after a closure requires many considerations.

Basic Principle -

1. Sick students, faculty members and other non-teaching staff should not come to school.
2. Schools/colleges must have facilities for regular hand washing or hand sanitation. Daily disinfection and cleaning of the school surface is necessary.
3. School/college should provide purified water, sanitation and waste management facilities.
4. School/college need to promote social distancing.
5. Should know the latest facts about the basic information of COVID-19 through official/ reputed sources such as WHO, UNICEF and National Health Ministry advisory.
6. Implement social distancing by staggering the beginning and end of school/college day, cancelling assemblies, sports events and other events which cause crowd, possibly create space in the desk at least one meter apart, avoid unnecessary touching.
7. Develop flexible attendance and sick leave policies which encourage students and staff to stay at home. Identify critical job responsibility and position and plan for alternative coverage.
8. Plan for possible academic calendar changes.
9. Plan for continuity learning by using e-learning strategies, assigning reading and exercises for home study, Radio or television broadcasts of academic content, teacher should have to take daily

- or weekly follow up of students.
10. Psychological support- Encourage students to discuss questions and also encourage them to talk to teachers. Work with school's health workers/ social workers to identify and support students and staff who shows signs of distress.
 11. Focus on good health behaviours, such as covering coughs and sneezes with elbows and hand washing. Encourage them to express and communicate their feelings.
 12. Incorporate health education: can cover the study of viruses disease transmission and importance of vaccination. Social studies can focus on the history of pandemics and their secondary effects.

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Splendid Consequences of Coronavirus on Society and Environment

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Abstract -

Since December 2019, acute respiratory disease (ARD) due to 2019 novel coronavirus (2019-nCoV) emerged in Wuhan city and rapidly spread throughout China. People are criticizing the outspread of COVID-19 Virus. But one must not neglect the positives of COVID-19's outspread. This paper starts with providing the origin of virus. Few effects of coronavirus are in favor of society and environment. New medical weapons are going to be found within the fight against the virus.

Key words - COVID-19, Human Society, Environment, etc

Introduction -

Coronaviruses (CoVs) primarily cause multiple respiratory and intestinal infections in humans and Animals. Although the history of CoVs began within the 1940's (Cheever F. S et al 1949, Bailey O. T et al.1949). The identification of first human identification of first human CoVs were reported within the 1960's, as causative agents for mild respiratory infections. Coronaviruses were recognized as a group in 1968 totally on the idea of their characteristic morphology as seen in the microscope (Tyrrell et al. 1968). Since that time our knowledge of the structure and replication of those viruses has increased steadily and has been periodically reviewed (McIntosh 1974; Tyrrell et al. 1978; Robb and Bond et al, 1979a). The idea for this review, which concentrates on the molecular biology of coronaviruses, is principally the new data which has become available within the last some years. The pathogenicity of those viruses, which are associated with many diseases of clinical importance in animals and humans that the topic of the accompanying article.

Coronaviruses infect an outsized form of animal species ranging from fowl to humans. The group comprises 11 recognized viruses, and five

more that are tentatively included). Some members, notably infectious bronchitis virus (IBV) and mouse hepatitis Virus (MHV), may be distinguished into several serotypes and others, e.g., human Coronavirus (HCV) and human enteric coronavirus (HECV), are presently considered as distinct, although they will be closely related. In general, the inter- and intraspecies Serological relationships of coronaviruses remain poorly understood (Tyrrell et al. 1978, Robb and Bond 1979a), although recent studies indicate that it's going to soon be possible to Define one avian and two mammalian antigenic groups (Pedersen et al. 1978, Macnaughton et al. 1981).

Pre-existence of Coronavirus -

In 2003, SARS-CoV was identified as a causative agent during the world pandemic SARS. According to the World Health Organization (WHO), the emergence by SARS-CoV had affected 8422 cases in 32 countries, 916 of which died with the death rate of 10-15% (WHO 2003). Following this outbreak, ten years after, another highly pathogenic coronavirus MERS-CoV epidemic surfaced in Middle Eastern countries in 2013 (Park S.Y et al,2019). However, the major outbreak was happened within the Republic of Korea in 2015 (WHO 2014). The virus infection was majorly observed in adults, although it can affect any age of individuals (CDCP 2017). Within a very short time, the virus affected a total number of 1401 of individuals, 543 of which died with the mortality of rate of 39% worldwide, while in Saudi Arabia alone it absolutely was 37.5% (WHO 2019). In the last two years, there are extensive studies on these human coronaviruses, especially on SARS- and MERS-CoVs that led not only to grasp coronaviruses biology but has also driven the discovery of new therapeutics for in case if any future outbreaks.

Consequences of coronavirus on society and

environment:

The whole world has been overwhelmed by the worldwide attack of the corona virus. Doctors, nurses and physicians workers around the world are battling the virus in danger of life-threatening infection, stalling the economy. People are locked in the house, but all this darkness has a silver lining, that's the lesson Corona taught the entire world. The corona virus is wreaking havoc around the world. Within the last four months, it has infected nearly 3 million people, killed two million and locked down billions. Economists are calculating the massive human and economic cost to the world.

Nothing exists until it is measured -

The solution to question begins with understanding and measuring it. What quantity total corona is affected? What quantity in India, what quantity in America, what quantity with in the world? Daily, not hourly, the numbers are changing. These figures are useful – they tell the extent of the problem, the side effects, and also the success of the effort. But they are inadequate, in some cases misleading. Both tell and conceal numbers. What do they hide? How much is that the corona block? People who tested positive are considered to be more affected. But if a village has not done a single test, should the village be considered corona-free? Or if very few tests are done, only people who have reached the hospital will know the entire true number? Seven lakh people in India with a population of 134 crore are tested to date. That is fifty out of one lakh. By testing randomly selected and very few people, we are confidently calculating the number of coronaviruses. This creates a misleading picture. About 50 to 80 percent of those infected with corona don't have any symptoms at the time of diagnosis. They are quietly spreading the virus. This means not only patients or contacts but also the general public to know the true number of infected people. The population sample or the entire population should be examined. This is difficult in India because there are not many facilities for checking. However, studies in Iceland, Italy, where the chance arose, and some studies in the US now show that between one and three percent of the population is infected with the virus. That account is extreme at the peak, India could be infected by one to four crore people. We are saying today only thirty thousand! The statistics

seem very odd. Are we missing anything? We need to check. Nobel Prize-winning scientist Niels Bohr used to say 'Nothing exists until it is measured.' They will only inherit existence if you measure the extent, death and consequences of corona infection. For effective control of corona, all patients must know. For that, we have to do hundreds of times more testing than today. Otherwise, we'd be mistaken for a whole iceberg, with only the littlest tip of the iceberg visible on the water. The ship of these who make such an error sinks on the fact of the hidden a part of the iceberg. Therefore, caution is required. Its measurement is extremely important to unravel the matter. Don't depend upon official statistics for that. It may be partial. The reality can only be known by conducting classical measurements independently.

Fresh air and clean breath -

A brand new sense of cleanliness!

Hygiene is our understanding of daily brushing of teeth, bathing, keeping the premises clean, etc. Even in 'Swachh-Bharat', the most emphasis is on clean water, latrines, sewage etc. No After the corona, 'breathing hygiene' needs to be added. If many viruses (corona, flu, colds, and measles) are spread by inhalation, air, they're going to not escape by pure water chlorination or spraying to kill mosquitoes. You would like to form sure that you simply don't leave contaminated air on others or that you simply don't inhale it. For this, social practices like keeping physical distance between one another (six to twenty feet), covering the nose and mouth with a mask or handkerchief while walking outside the house, covering the nose and mouth while coughing and sneezing will need to be inculcated. Pure, clean and sterile air may be a basic human need. A brand-new culture will need to be formed that completes the house design, urban planning, industrial culture similarly as social customs and private habits. It is said that someone needs clean air and clean breath to measure a healthy life; But to remind you of the fundamental truth. Thank you Corona!

Unwillingly release of Alcohol-tobacco - Spit-free India?

The corona spreads through the sputum. People spit everywhere after eating leaf-tobacco. That the government closed the

page. within the store, people take in the bar. Comes in close contact. Drunken men break the foundations that the sale of alcohol also stopped. On Annunciation Day, a sudden ban on alcohol and tobacco was imposed across the country. The ban, which had been demanded by addicts and cancer survivors for years and was ignored by the govt thanks to financial reasons, was suddenly implemented by Corona.

But why aren't countless people hooked in to nicotine or alcohol hooked in to tobacco? But it stopped. Staying removed from these addictions for a month will benefit many, break the habit and provides up the choice of quitting alcohol and tobacco forever.

Someone should say, 'Fatigue free India' are going to be a reality.

New medical weapons are going to be found within the fight against the virus -

In a special article written by Bill Gates in 'The Economist', it's said that there'll be unprecedented research in three areas to address the world catastrophe of Corona. Countless scientists are working to search out the solution. It'll vaccinate against corona; but new vaccines are going to be developed soon. This can make it possible to form a fast vaccine against many contagious diseases.

Second, simple, instant diagnostic tests for coronavirus and other viral diseases are going to be available reception. These deepstick tests, like the glucose test or the Pregnancy Test, can diagnose corona and other inflammatory diseases. Third, antiviral drugs are going to be released this century, even as antibiotics are effective against bacteria and have saved billions of lives within the last century. Effective treatment for corona and lots of other viral diseases is going to be widely available. We can add another four changes to the present. It might be common for a doctor to present medical advice and prescribe medication over the phone without direct contact between the patient and therefore the doctor to stop corona infection. The US recently issued a fatwa legalizing medical advice over the phone for minor complaints from patients during the Corona period. 'Virtual' healthcare is going to

be introduced within the society using Skype-Call, WhatsApp, Zoom etc. and lots of apps rather than phone. There will be less must attend the doctor and wait. The doctor is going to be ready to see more patients in less time without the chance of infection.

Conclusion -

In conclusion it may say that the every coin has two sides. In the same way we cannot neglect the positive impact of Covid-19 on our surrounding.

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Immediate Challenges of The Agriculture Due to Covid 19

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Introduction -

Agriculture is the basic Occupation in India. The Main source of livelihood for the country's 140 crore population is agriculture. The basic needs of food and clothing are met through agriculture. India's agriculture is composed of many crops, with the foremost food staples being rice and wheat. Indian farmers also grow pulses, potatoes, sugarcane, oilseeds, and such non-food items as cotton, tea, coffee, rubber, and jute. India is a fisheries giant as well the overwhelming size of the agricultural sector, however, yields per hectare of crops in India are generally low compared to international standards. Improper water management is another problem affecting India's agriculture. At a time of increasing water shortages and environmental crises, prospects of agricultural production during that period were not considered bright. The fact is that agriculture accounts for as much as a quarter of the Indian economy and employs an estimated 60 percent of the labor force. It is considered highly inefficient, wasteful, and incapable of solving the hunger and malnutrition problems. It is estimated that as much as one-fifth of the total agricultural output is lost due to inefficiencies in harvesting, transport, and storage of government-subsidized crops. Agriculture development is a major contributor to India's development. Waiver of farm loan, subsidies, agriculture export policy, technology, transportation, chemical fertilizers, hybrid seeds, pesticides etc. in this case the government's policy is accelerating development. But natural as well as manmade factors are a major obstacle in agriculture development. Due to unseasonal rainfall, early and late monsoon, cyclone, heavy rainfall, drought etc. cause many natural problems facing agriculture. But COVID19 is a big burning issue facing the world right now. Its effects on the agricultural occupation are also immediately visible. There are

many big challenges facing the agriculture sectors.

The ongoing health crisis around COVID19 has affected all walks of life. Protecting the lives of people suffering from the disease as well as frontline health responders have been the priority of nations. Governments have swung into actions since the Corona virus attack created an unprecedented situation. India declared from 24 March 2020 three-time nation-wide lockdown till 3 May 2020. In the initial phase, was subsequently extended for achieving satisfactory containment of the virus spread. During these challenging times, how does Indian Agriculture respond to the crisis and how do government measures affect 140 million peoples across the country. Thereafter impacts the economy of a very important country in the developing world? We assess the immediate challenges that COVID19 has posed to the agriculture sector and suggest mitigation measures to ensure a sustainable food system in the post-crisis period.

Immediately After the Nation-Wide Lockdown Was Announced -

1. The Indian Finance Minister declared an INR 1.7 trillion package, mostly to protect the vulnerable sections (including farmers) from any adverse impacts of the Corona pandemic.
2. The announcement, among a slew of benefits, contained advance release of INR 2000 to bank accounts of farmers as income support under PM-KISAN scheme.
3. The Government also raised the wage rate for workers engaged under the NREGS, world's largest wage guarantee scheme.
4. Under the special scheme to take care of the vulnerable population, the Pradhan Mantri Garib Kalyan Yojana has been

- announced.
5. Additional grain allotments to registered beneficiaries were also announced for the next three months.
 6. Cash and food assistance to persons engaged in the informal sector, mostly migrant laborers, have also been announced for which a separate Prime Minister Citizen Assistance and Relief in Emergency Situations fund has been created.
 7. The Indian Council of Agricultural Research (ICAR) has issued state-wise guidelines for farmers to be followed during the lockdown period.
 8. The Reserve Bank of India has also announced specific measures that address the “burden of debt servicing” due to COVID19 pandemic.

Immediate Challenges of Agriculture -

In spite of all these measures and in view of continuing restrictions on movements of people and vehicular traffic, concerns have been raised regarding negative implications of COVID19 pandemic on the farm economy.

1. This is the peak of the rabi season in India and crops like wheat, gram, lentil, mustard, paddy etc. are at harvestable stage or almost reaching maturity.
2. This is also the time when the farm harvests reach the market yards for assured procurement operations by designated government agencies. Moreover, any severe disruption to the supply of perishable fruits and vegetables, dairy products, fish, etc. having mobilized to meet the increasing demand from a bulging middle class as well as urban and rural consumers, may create irreparable damage to all actors in the supply chain.
3. The migration of workers from few parts to their native places has also triggered panic buttons, as they are crucial for both harvesting operations and post-harvest handling of produce in storage and marketing centers.
4. Making the food grains, fruits and vegetables and other essential items

available to consumers, both in rural and urban areas, is the most critical challenge for Government machinery during the lockdown period. Smooth functioning of the supply chain, with adequate safety measures for the people involved, is of paramount importance.

5. Transportation of public distribution system (PDS) items to last mile delivery agents, by both rail and road, has to be ensured by respective Government agencies. Distribution of the commodities to vulnerable populations, while maintaining prescribed guidelines and protocol, particularly of social distancing, must be effectively monitored.
6. As the ongoing lockdown coincides with the rabi harvest season, farmers across the country look up to the Government to ensure uninterrupted harvesting of the crops as well as smooth procurement operations. While ensuring availability of laborers for critical farm operations, their safety (from any COVID infection) and welfare must be prioritized by the Government systems.
7. The sale of dairy products; fish; poultry, etc. has also been hit during the lockdown period as the uptake by the organized industry players has been affected due to shortage of workforce and transport issues.
8. As weather has been very erratic over the past few months in many parts, harvested produce must also be protected from such risks.

Mitigation Measures of Agriculture -

The poor sections of society are always the hardest hit in any disaster or pandemic situation. With about 85 percent of Indian farm households being small and marginal farmers. Significant part of the population being landless farm laborers, welfare measures to contain any damage from COVID19 are definitely going to help them with sincere implementation. The focus of the Government therefore has to be to protect the lives of every citizen. However, people living on agriculture and allied activities, mostly those losing

their income from informal employment at this lockdown period, have to be provided with alternative avenues till the economy bounces back, when this health crisis is successfully overcome.

1. To sustain the demand for agricultural commodities, investments in key logistics must be enhanced. Moreover, e-commerce and delivery companies and start-ups need to be encouraged with suitable policies and incentives.
2. The small and medium enterprises, running with raw materials from the agriculture and allied sector or otherwise, also need special attention so that the rural economy doesn't collapse.
3. To obviate the immediate concerns of scarcity of farm labor, policies must facilitate easy availability of machinery through state entities, Farmer Producer Organizations (FPOs) or custom hiring centers (CHCs) with suitable incentives.
4. It is also suggested to explore leveraging NREGS funds to pay part of the farm labor (with farmers paying the balance wage amount) to lessen the monetary burden on the farmer, while ensuring wage employment to the landless laborers and workers.
5. To answer queries relating to the announced measures of Government and addressing grievances of farmers, besides providing advisories on farm operations; availability of agri-inputs, dedicated centers must be established by the Government.
6. Agriculture in India is a State subject, and as has been observed in past years, policies and programs vary from one State to the other. However, agricultural activities, being interconnected in neighboring regions, agri-sops or benefits must not distort the market scenario.
7. Waiver of farm loans, evidencesuggests, have not fully benefited the majority of small and marginal farmers. Rather, it affects the future credit behavior of the borrowers and thus negatively impacts the agricultural credit culture altogether.
8. As the kharif season is fast approaching, institutional lending of crop loans should be expanded and facilitated for smooth and sufficient flow of credit to borrowing farmers.
9. Agri-inputs – seeds, fertilizers, agro-chemicals, etc. – have to be pre-positioned for easy availability. Private sector must play a significant role with necessary policy support.
10. Relaxation of the norms by Agricultural Produce Market Committees allowing farmers to sell their produce beyond the designated mandis will certainly ease the burdens of farmers.
11. State Governments must gear up their machineries for smooth procurement operations of farmers' marketable surpluses at MSP (minimum support price) or through other price support schemes.
12. Under the COVID19 pandemic, being a health crisis of unprecedented proportions, the major share of future Budget allocations obviously would be apportioned for the health sector. However, investments should not be crowded out of the primary sector to prevent irreversible damage to the farm economy.
13. Manufacturing and services sectors may be severely hit in the short run till the time the economy bounces back. It will be thus very appropriate to focus attention on the agriculture sector as a growth engine and also to bring resilience in food security.
14. At this critical stage, where climate change is already adversely impacting the agriculture sector, productive investments, including on research and innovation, would be very purposeful.
15. Structural reforms such as land leasing, contract farming and private agricultural markets, etc. have long been advocated to bring enhanced investments into the agriculture sector and to push its growth. However, there has not been uniform implementation of these legislations by State Governments and so the full

- potential of the sector is unrealized. These reforms need significant political will.
16. With a burgeoning population, there is a corresponding rise in food demand in India. However, the negative externalities of the Green Revolution, particularly the environmental trade-off and staple cereals fundamentalism, have since been realized. It is thus desirable to switch over to a suitable model with a far stronger nutrition focus where diets are more diverse. A post-COVID situation offers that unique opportunity to repurpose the existing food and agriculture policies for a healthier population.
 17. There have been global concerns, rather speculations, on restriction of exports of agricultural commodities by a few global players. India, being trade-surplus on commodities like rice, meat, milk products, tea, honey, horticultural products, etc. may seize the opportunities by exporting such products with a stable agri-exports policy. Development of export-supportive infrastructure and logistics would need investments and support of the private sector that will be in the long term interests of farmers in boosting their income.
 18. The India Meteorological Department predicts a favorable monsoon in the 2020 as the El-Nino weather phenomenon,

that disrupts rainfall in India, is not evident. This is indeed good news in the COVID scenario, assuming agriculture can practice largely unscathed.

19. The existing landscape of policy incentives that favor the two big staples of wheat and rice has to change.
20. Designing agricultural policies, post-COVID19 scenario, must include these imperatives for a food systems transformation in India.

Conclusion -

Recognizing the importance and usefulness of agriculture, the government has announced various schemes. Immediate help has been announced to prevent the collapse of the agricultural sector in the country. This matter is very important for agriculture. Even so, owning one is still beyond the reach of the average person. Like other sectors, the agricultural sector has deteriorated. Farmers are facing huge difficulties due to low market prices of some rabi crops, such as vegetables and fruits, other than food crops. Along with the biological epidemic of COVID19, the farmer is in a dilemma of economic and agricultural work. To get out of this, one has to wait for the growing crisis of COVID19 and the situation to face.

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Effect of COVID-19 on Human Psychology and Role in Prevention of Corona Virus.

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Abstract -

The corona virus disease 2019 (COVID-19) pandemic is having a profound effect on all aspects of society, including mental health and physical health. We explore the psychological, social, and neuroscientific effects of COVID-19 and set out the immediate priorities and longer-term strategies for mental health science research. As we know a new respiratory disease called COVID-19 is spreading across the world. India has also reported cases from states and the government is trying to contain the spread of the disease. As an important frontline worker, you play a major role in preventing its spread. COVID-19 is caused by a contagious newly identified virus. There are no therapeutics and vaccines available and there is presumably no pre-existing immunity in the population. Symptoms of COVID-19 range from no symptoms (asymptomatic) to severe pneumonia and can lead to death.

Introduction -

Corona viruses are common human pathogens, causing generally-mild acute respiratory illnesses known as the common cold. Prior to December 2019 when clusters of pneumonia cases with unknown etiology were detected in Wuhan, China, only two additional strains of corona viruses had caused outbreaks of severe acute respiratory disease in humans: the severe acute respiratory syndrome corona virus (SARS-CoV) and Middle East respiratory syndrome corona virus (MERS-CoV). On 9 January 2020, a novel corona virus, 2019-nCoV (temporary name), was officially identified as the cause of an outbreak of viral pneumonia in Wuhan. In the following weeks, the virus spread rapidly within China, and an increasing number of cases appeared in other countries. On January 30th 2020, the International Health Regulations (2005) Emergency Committee agreed

that the outbreak meets the criteria for a Public Health Emergency of International Concern and the virus named SARS-CoV-2 by the International Committee on Virus Taxonomy on the same day. Subsequently, a group of virologists in China suggested renaming SARS-CoV-2 as human corona virus 2019 (HCoV-19), considering that such a name would distinguish the virus from SARS-CoV and keep it consistent with the WHO name of the disease it causes, COVID-19. Virus naming remains controversial in the scientific literature, the virus remains referred to by these different names, even though suggested keeping SARS-CoV-2 as its name. On March 11 2020, WHO characterized COVID-19 as a Pandemic.

Corona viruses -

Corona viruses (CoVs) are enveloped, positive-sense, single-stranded RNA viruses that belong to the subfamily Coronavirinae, family Coronaviridae, order Nidovirales. The virion has a nucleocapsid composed of genomic RNA and phosphorylated nucleocapsid (N) protein, which is buried inside phospholipids bilayers and covered by spike proteins. The membrane (M) protein (a type III transmembrane glycoprotein) and the envelope (E) protein are located among the spike (S) proteins in the virus envelope. CoVs were given their name based on a characteristic crown-like appearance. There are four genera of CoVs, namely, Alphacoronavirus (αCoV), Betacoronavirus (βCoV), Deltacoronavirus (δCoV), and Gammacoronavirus (γCoV). Evolutionary analyses have shown that bats and rodents are the gene sources of most αCoVs and βCoVs, while avian species are the gene sources of most δCoVs and γCoVs. CoVs have repeatedly crossed species barriers and some have emerged as important human pathogens. The genomic RNA is used as template to directly translate polyprotein (pp) 1a/1ab, which encodes non-structural proteins to form

the replication-transcription complex (RTC) in double-membrane vesicles. Subsequently, a nested set of sub genomic RNAs are synthesized by RTC in a manner of discontinuous transcription. The first ORFs (ORF1a/b), about two-third of the whole Proteins (nsp1-16). Other ORFs on the one-third of the genome near the 3'-terminus encodes the main structural proteins: S, M, E, and N proteins. Besides these four main structural proteins, CoVs encode special structural and accessory proteins. All the structural and accessory proteins are translated from the sub genomic RNAs of CoVs.

Impact of Corona Virus on Human Psychology -

What is the effect of COVID-19 on risk of anxiety, depression, and other outcomes.

Although a rise in symptoms of anxiety and coping responses to stress are expected during these extraordinary circumstances, there is a risk that prevalence of clinically relevant numbers of people with anxiety, depression, and engaging in harmful behaviors (such as suicide and self harm) will increase. Of note, however, is that a rise in suicide is not inevitable, especially with national mitigation efforts. The potential fallout of an economic downturn on mental health is likely to be profound on those directly affected and their caregivers. The severe acute respiratory syndrome epidemic in 2003 was associated with a 30% increase in suicide in those aged 65 years and older; around 50% of recovered patients remained anxious; and 29% of health-care workers experienced probable emotional distress.¹⁸⁻²⁰ Patients who survived severe and life-threatening illness were at risk of post-traumatic stress disorder and depression.^{19,20} Many of the anticipated consequences of quarantine and associated social and physical distancing measures are themselves key risk factors for mental health issues. These include suicide and self-harm, alcohol and substance misuse, gambling, domestic and child abuse, and psychosocial risks (such as social disconnection, lack of meaning or anomie, entrapment, cyber bullying, feeling a burden, financial stress, bereavement, loss, unemployment, homelessness, and relationship breakdown). A major adverse consequence of the COVID-19 Pandemic is likely to be increased social isolation and loneliness (as reflected in our surveys), which

are strongly associated with anxiety, depression, self-harm, and suicide attempts across the lifespan. Tracking loneliness and intervening early are important priorities. Crucially, reducing sustained feelings of loneliness and promoting belongingness are candidate mechanisms to protect against suicide, self-harm, and emotional problems. Social isolation and loneliness are distinct and might represent different risk pathways. To inform management of COVID-19, it is vital to understand the socioeconomic effect of the policies used to manage the pandemic, which will inevitably have serious effects on mental health by increasing unemployment, financial insecurity, and poverty. Involvement of people with lived experience and rapid qualitative research with diverse people and communities will help to identify ways in which this negative effect might be alleviated. Achieving the right balance between infection control and mitigation of these negative socioeconomic effects must be considered. The immediate research priorities are to monitor and report rates of anxiety, depression, self-harm, suicide, and other mental health issues both to understand mechanisms and crucially to inform interventions. This should be adopted across the general population and vulnerable groups, including front-line workers. Monitoring must go beyond NHS record linkage to capture the real incidence in the community, because self-harm might become more hidden. We must harness existing datasets and ongoing longitudinal studies, and establish new cohorts with new ways of recording including detailed psychological factors. Techniques assessing moment to moment changes in psychological risk factors should be embraced. Given the unique circumstances of COVID-19, data will be vital to determine causal mechanisms associated with poor mental health including loneliness and entrapment. To optimize effectiveness of psychological treatments, they need to be mechanistically informed that is, targeting factors which are both causally associated with poor mental health and modifiable by an intervention. A one-size-fits-all response will not suffice because the effectiveness of interventions can vary across groups. Digital psychological interventions that are mechanistically informed, alongside better understanding of the buffering effects of social relationships during

stressful events, are required in the long term. The digital Response is crucial, not only because of social isolation measures but also because less than a third of people who die by suicide have been in contact with mental health services in the 12 months before death. Digital interventions for anxiety, depression, self-harm, and suicide include information provision, connectivity and triage, automated and blended therapeutic interventions (such as apps and online programmer), telephone calls and messages to reach those with poorer digital resources (digital poverty), suicide risk assessments, chatlines and forums, and technologies that can be used to monitor risk either passively or actively. The digital landscape extends beyond apps and requires an evidence base. Artificial intelligence-driven adaptive trials could help to evaluate effectiveness, while digital phenotyping could be helpful to ascertain early warning signs for mental ill-health.

Table 1: Psychology and individual factors: the effect of COVID-19 on Human Psychology.

	Immediate actions	Longer-term strategic programmer
What is the effect of COVID-19 on risk of anxiety, depression, and other outcomes.	Improve monitoring and reporting of the rates of anxiety, depression, self-harm, suicide, and other mental health issues; determine the efficacy of Mechanistically based digital and non-digital interventions and evaluate optimal model(s) of implementation	Determine the mechanisms (eg. entrapment and loneliness) that explain the rates of anxiety, depression, self-harm, and suicide; understand the role of psychological factors in buffering the effect of social context on mental health issues; ascertain the longer-term consequences on wellbeing of COVID-19 for the young and older generations (and vulnerable groups)
What is the optimal structure for a mentally healthy life in the wake of COVID-19 and Social or physical distancing?	Determine what psychological support is available to help front-line medical and health-care staff and their families; understand the psychological (eg. coping), physiological (eg. sleep and nutrition), and structural (eg. work rotas and daily routines) factors that protect or adversely affect mental health	Develop novel interventions to protect mental wellbeing, including those based on positive mechanistically based components, such as altruism and prosocial behavior and understanding of online life; understand how we optimize positive social resources and enhance resilience in the face of stress; establish the effects of altruism on mental health and wellbeing in the wake of COVID-19

Rapid learning to apply to future infection waves or pandemics

The outputs of immediate research could help to inform responses to future infection waves or pandemics by identifying:

- Mechanisms (eg, coping strategies and preventive interventions) to support vulnerable groups under pandemic conditions, such as front-line health and social care staff, those with pre-existing

mental health issues, young people (aged d’18 years), and older adults (aged e’65 years)

- Interventions that can be delivered under pandemic conditions to reduce mental health issues and boost wellbeing, including those that can be repurposed
- Solutions to the effect of repeated media consumption about corona virus disease 2019 (COVID-19) on the mental wellbeing of the population, to help individuals stay informed by authoritative sources while also preventing over-exposure and mitigating the effect of viewing traumatic content.
- Methods for promoting more successful adherence to behavioral advice about COVID-19 while enabling mental wellbeing and minimizing distress.

Individual role of Frontline workers in prevention of Corona Virus Your Role as a Frontline Worker is two-fold -

1. Spread key messages in the community about measures to prevent the infection.
2. Take actions for early detection and referral of suspected COVID-19 cases.

How does COVID-19 spread?

COVID-19 spreads mainly by droplets produced as a result of coughing or sneezing of a COVID-19 infected person. This can happen in two ways:

- Direct close contact: one can get the infection by being in close contact with COVID-19 patients (within one Meter of the infected person), especially if they do not cover their face when coughing or sneezing.
- Indirect contact: the droplets survive on surfaces and clothes for many days. Therefore, touching any such infected surface or cloth and then touching one’s mouth, nose or eyes can transmit the disease.

The incubation period of COVID 19 (time between getting the infection and showing symptoms) is 1 to 14 days some people with the infection, but without any serious symptoms can also spread the disease.

Key messages to spread for prevention of

COVID-19**1) How to avoid getting COVID-19 or spreading it?****a) Practice Social Distancing -**

- Avoid gatherings such as meals, haats, gatherings in religious places, social functions etc.
- Maintain a safe distance of at least one Meter between you and other people when in public places, especially if they are having symptoms such as cough, fever etc. to avoid direct droplet contact.
- Stay at home as much as possible.
- Avoid physical contact like handshakes, hand holding or hugs.
- Avoid touching surfaces such as table tops, chairs, door handles etc.

b) Practice good hygiene -

- Wash your hands frequently using soap and water:
- After coming home from outside or meeting other people especially if they are ill.
- After having touched your face, coughing or sneezing.
- Before preparing food, eating or feeding children.
- Before and after using toilet, cleaning etc.
- While coughing or sneezing cover your nose and mouth with handkerchief.
- Wash the handkerchief at least daily
- It is preferable to cough/sneeze into your bent elbow rather than your palms.
- Do not spit or shout in public places to avoid the spread of droplets.
- Do not touch your eyes, nose and mouth with unclean hands.
- Ensure that the surfaces and objects are regularly cleaned.

2) What to do if you are having symptoms or have travelled to other countries or states in past two weeks?

- Symptoms of COVID 19 and seasonal respiratory illness (common cold/flu) are similar. All people with these symptoms may not have COVID 19.
- Following persons should be quarantined for 14 days at home as a precaution:

- People who have travelled to COVID 19 affected countries/areas in past 14
- Days Those who have come in close contact with a suspected/confirmed COVID
- 19 patient Those who develop symptoms

Myths vs. reality for COVID-19 -

As COVID-19 is a new condition, there are many common myths.

Myths	Facts
1. The corona virus can be transmitted through mosquitoes.	The corona virus CANNOT be transmitted through mosquito bites.
2. Everyone should wear a mask.	People who should wear a mask are: Those having symptom of fever, cough etc. Healthcare workers in facilities caring for ill people. The assigned care taker of a home quarantined person. Even those wearing masks should wash their hands frequently
3. Only people with symptoms of COVID-19 can spread the disease.	Even people with the COVID-19 infection but no symptoms can spread the disease.
4. Eating garlic and drinking alcohol can prevent COVID 19	Eating garlic and drinking alcohol DOES NOT prevent COVID 19

Infection prevention and control in healthcare settings -

ECDC has published a technical report on IPC for the care of patients with COVID-19 in healthcare settings as well as a technical report on personal protective equipment needs in healthcare settings for the care of patients with suspected or confirmed COVID-19. ECDC has also published a leaflet entitled 'Advice to healthcare workers: management of patients with COVID-19 infection'. In order to prevent secondary transmission in healthcare settings, healthcare providers should be informed of the ongoing outbreak, and EU/EEA countries should ensure that timely and rigorous IPC measures are applied when dealing with suspect and confirmed cases, from the first suspicion of COVID-2019. ECDC recommends that suspected cases in primary and emergency care are isolated, or if this is not feasible, separated from other patients. Suspected patients should be asked to wear a surgical mask in order to reduce the spread of respiratory droplets. Organizing separate areas or facilities for triaging of suspected cases should be considered and planned. Although there is so far no evidence of airborne transmission, we recommend a cautious approach due to lack of studies excluding this mode of transmission. Confirmed cases requiring admission should be placed in an isolation room with a dedicated

bathroom. The placement in airborne precaution single rooms with negative pressure and ante-room, if available, is encouraged until more information about transmission routes is available. Healthcare workers managing suspected or confirmed cases should wear personal protective equipment (PPE) for contact, droplet and airborne transmission. When using PPE, the correct donning and doffing process should be followed; further information on the donning and doffing procedures can be found in the ECDC Technical Document 'Guidance for wearing and removing personal protective equipment in healthcare settings for the care of patients with suspected or confirmed COVID-19'. ECDC recognizes that with increasing numbers of COVID-19 cases, full compliance with airborne precautions may be challenging, because of lack of time and/or the lack of PPE. Given the lack of evidence for airborne transmission of COVID-19 to date, surgical mask may be used in case of shortage of FFP2 or FFP3 respirators. In case of aerosol-generating procedures (e.g. intubation, BAL, sputum induction), FFP2 and FFP3 respirators should always be used. Standard precautions should always be implemented for all patients, including full compliance with hand hygiene according to WHO's Moments for Hand Hygiene approach before touching a patient, before any clean or aseptic procedure is performed, after exposure to body fluid, after touching a patient, and after touching a patient's surroundings. Respiratory hygiene measures include ensuring that all patients cover their nose and mouth with a tissue or elbow when coughing or sneezing; offering a medical mask to patients with suspected 2019-nCoV infection while they are in waiting/public areas or in cohorting rooms; performing hand hygiene after contact with respiratory secretions. Regular cleaning followed by disinfection of patients' rooms, furniture and frequently touched surfaces with hospital disinfectants active against viruses is recommended. Staff engaged in environmental cleaning and waste management should wear appropriate PPE. Mild cases may be cared for in the home environment. In this case, infection prevention and control measures as outlined in the WHO guidance for home care of patients with COVID-19, including, should be followed.

Infection prevention and control in the

community -

The use of personal protective measures (i.e. rigorous hand hygiene, cough etiquette, and face masks) can contribute to reducing the risk of transmitting or acquiring COVID-19 infections.

Rigorous hand-washing schemes, including washing of hands with soap and water for at least 20 seconds, or cleaning hands with alcohol-based solutions, gels or tissues is recommended in all community settings in all the possible scenarios. Organizations should ensure availability of sufficiently and suitable located washbasins and taps to encourage washing. Proper hand hygiene will also reduce the transmission of other communicable diseases. Covering the mouth and nose when coughing and sneezing (e.g. by using a paper tissue) may mechanically block the droplet transmission that is believed to be the principal transmission mode for COVID-19. The proper disposal of used tissues is important, followed by immediate hand washing after coughing/sneezing. The use of surgical face masks may decrease risk of infecting others when worn by a person with respiratory symptoms before seeking medical advice and while being assessed. There is no evidence on the usefulness of face masks worn by persons who are not ill, therefore this is not advisable. It is possible that the use of facemasks may even increase the risk of infection due to a false sense of security and increased contact between hands, mouth and eyes.

Social distancing measures -

Different social distancing measures can be considered in the different scenarios proposed. Self-isolation of close contacts is relevant, whereas during self-isolation of symptomatic persons may be considered to reduce local transmission. In the absence of clear evidence on the infectious period, it is reasonable to assume that infectiousness coincides with the symptomatic period. Additional steps to consider include school and day care measures or closures, measures at the workplace, and measures related to mass gatherings. In some countries such as China, internal travel restrictions or "Cordon sanitaire" have been imposed on large populations together with other containment measures. Individual social distancing measures (e.g. avoiding shaking hands and kissing, such as avoiding crowded transports and unnecessary

mass gatherings) should be followed during all the scenarios as a preventive measure.

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Coronavirus: Impact on Political System and International Relation

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Introduction -

Outbreaks of the coronavirus have affected the political systems of all countries. Many countries have postponed their political elections for fear of spreading the Kovid-19 virus, which appears to have stalled legal proceedings. It is also seen that political leaders have been replaced in many countries. In some countries the people have fully supported the policies and policies of the government while in some countries the people have completely opposed the policies of the government of the country in question. Here are some tips to help you get started: Objectives and conclusions have been decided.

Objectives -

1. To study the impact of the Corona epidemic on the political system in different countries
2. To study the changing international relations in the context of the Corona epidemic.
3. Corona epidemic problem investigated from a political point of view

Hypotheses -

1. The Corona epidemic has put economic strain on governments around the world
2. The Corona epidemic has had a negative impact on international politics.
3. Due to the Corona crisis, the top question facing the political system in the country is to get rid of this disease

Never before in recent history has the world faced such a challenge, which is affecting collectively, the Corona epidemic has the potential to affect every nation, every state, every region, every institution, every business and every individual. This scale of crisis must be taken into account. And an important precondition for a collective response is political unity. Today, the United States and China are pitted against each other because of this crisis. So in many nations

the people are against the government and are unhappy with the government's measures. As a result, there is opposition to the rulers in some nations. The political system of some nations has completely collapsed, all of which can be analysed as follows.

Political situation in major countries of the world -

Belgium - Sophie Williams was sworn in as Belgium's prime minister on March 17, 2020, after the incumbent government failed to control the corona virus. Seven opposition parties pledged to support Williams II's minority government to prevent a coronavirus epidemic in Belgium.

Brazil - Brazil's president has described the country's epidemic of corona as "fictional". As a result, 64% of Brazilians criticized his approach. Nine per cent of the people seem to support the impeachment action against him. During his address to the nation, millions of people protested in different ways. Some protested by throwing pots and some by throwing pans at them.

Iran - The government of the Islamic Republic of Iran has been hit hard by the Kovid-19 virus. The spread of the virus has raised questions about the existence of a future regime in Iran. Iran's President Hassan Rouhani has written a public letter to world leaders asking for help, saying US sanctions against Iran have left his country without access to international markets. The Iranian parliament was closed on March 3, 2020, after 23 of the 290 members of parliament tested positive for the virus.

South Korea - More than 1,450,000 people signed a statement in support of President Moon Jae-in's impeachment after the outbreak of the corona virus in South Korea. Because in response to the outbreak of the virus, they agreed to send masks and medical supplies to China to help. The Moon administration's continued handling of the crisis appears to have eroded other areas of Korean

society, as well as internationally.

Spain - On March 12, 2020, the Depot Congress voted to suspend activity for a week after multiple members tested positive for the virus. When the Congress of Deputies approved the extension of the alarm state in March, the opposition, the Popular Party And for the first time since Vokes voted in favor of the government, Catalan Republicans Separatist parties like the Left stayed away. In the case of the coronavirus, the PSOE (in alliance with UnidasPodemos) is leading a minority government, relying on the opposition's support for coronavirus measures, especially in terms of economic stimulus. So far, the cabinet has been discussing proposals to provide zero-interest loans to pay rent to tenants so that small landlords who depend on rental income can remain. PP leader Pablo Casado complained that the government did not inform him of the coronavirus developments. Opposition parties, of course, are keeping a close eye on the government's policies.

America - Due to stock market crashes, high unemployment claims, and declining economic activity due to the spread of the coronavirus epidemic across the country, the US Congress came together to enact legislation to remedy the economic consequences of the epidemic and pass the Coronavirus Aid, Aid and Financial Security Act (KRES). The outbreak prompted the United States to begin adopting common social policies in other rich countries, such as universal health care, universal child care, sick leave, and higher levels of funding for public health. Political analysts have speculated that this could have a negative effect on Donald Trump's chances of being re-elected in the 2020 presidential election.

India - India's political system is facing many problems due to the epidemic of Corona. As India is a federal system, coordination and harmony is maintained between the Central and the constituent states. But despite this, the big problem of other states workers, students, homeless citizens, etc. has been created due to the people's downfall. Since the Indian political system is democratic, the leadership here has been elected by the people. This leadership does not pose much of a problem to the Indian political system as the current situation is one and the same, but the growing economic burden poses a major challenge to the Indian

political system.

International relations and coronavirus - European Union - Outbreaks appear to be exacerbated during this period. In March, Germany and France banned the export of medicinal equipment. So many member nations closed their borders. Spanish Prime Minister Pedro Sanchez said, "If we do not now propose a united, strong and effective response to this economic crisis, the consequences will be even harsher, but the consequences will be even more pronounced and we are at risk." So Italian Prime Minister Giuseppe Conte said that "the whole European project is in danger of losing Raison d'Itre in the eyes of its own citizens."

Japan-South Korea relations - Japan-South Korea relations appear to have deteriorated as a result of the epidemic. The South Korean government described the move as "unrealistic, excessive and highly regrettable" after Japan announced it had begun investigating all passengers coming from South Korea. In addition, some local governments in Japan, whose names have not been released, have also announced their intention to purchase masks in Korea. The masquerade between Japan and South Korea has also caused a great deal of controversy. In the case of Masak, Japan accused South Korea of not helping, resulting in strained relations.

China-US relations - China and the US have been blaming each other for the Corona epidemic and a literal war of words has erupted. A new war for supremacy is raging in both nations. It was started by America. As a result, relations between the two nations are deteriorating. This is going to have a negative impact on the international system. The international spread of the corona virus has led the United States to accuse China. The United States has criticized the Chinese government over the outbreak in China's Hubei province. The Chinese Foreign Ministry has claimed that the US military is behind the virus. The Chinese ambassador threatened economic retaliation when US ally Australia suggested an international inquiry into the origin of the virus. China has sent aid to several countries through the World Health Organization and the African Union to counter the negative image in the early stages of the epidemic. According to Yangyang Cheng, a postdoctoral

research associate at Cornell University, 'The Chinese government is trying to project Chinese state power beyond its borders and establish China as a world leader, no different than the U.S. government doing for centuries Is part.'

Conclusion -

Overall, the epidemic of corona has created extremely challenging conditions nationally and internationally. Each nation is trying to cope with this situation on its own. These efforts are gaining public support in some nations. In some nations, however, people are opposed to political leaders and the government. In some places, political leaders have lost their positions. In countries where political leaders and political systems do not take the epidemic seriously, however, the masses have come to oppose it.

The political systems of nations have to deal with the areas of health, economic, social, defense,

etc. at the same time, in which the legislatures are closed. A big problem is facing every political system.

In terms of international relations, the epidemic has caused divisions among EU member states. The United States and European nations appear to be at odds with each other in many respects. Both the United States and China are constantly at odds with each other and blame each other for the disease. These epidemics have left China alone. Relations between Japan and South Korea have soured. Overall, the epidemic has had a negative impact on international relations.

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Key role in Prevention of Corona Virus Infection

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Abstract -

This paper gives the individual role in prevention of novel Corona virus, known as COVID-19, a severe acute respiratory syndrome for human health. This paper deals with the origin, transmission, infection, prevention and control including health care workers and protection. It also gives the scientific approach for stopping the spreading of Covid-19 to human beings through simple day to day activities.

Keywords - COVID-19, disease, Prevention, human beings.

Introduction -

On December 31, 2019, China informed the World Health Organization of a number of cases of pneumonia of an unknown cause in Wuhan city in Hubei province. On January 9, 2020, the WHO issued a statement saying Chinese researchers have made preliminary determination of the virus as a novel Coronavirus.

Since then, globally, 4,354, 827 have been infected as of today (13th May 2020), and the total number of deaths from the disease now stands at 293,058. In India 74, 480 have been infected and 2415 (13th May 2020) deaths from this disease according to Worldmeter data. Corona viruses are a large family of viruses with some causing less severe common cold to more severe diseases such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS). The SARS-CoV-21 is a corona virus very similar to the one that caused SARS.

Literature survey -

Modes of transmission of the COVID-19 virus -

Respiratory infections can be transmitted through droplets of different sizes: when the droplet particles are $>5-10$ μm in diameter they are referred to as respiratory droplets, and when they are <5 μm

in diameter, they are referred to as droplet nuclei [1].

According to current evidence, COVID-19 virus is primarily transmitted between people through respiratory droplets and contact routes. In an analysis of 75,465 COVID-19 cases in China, airborne transmission was not reported [2-6].

According to current evidence, COVID-19 virus is primarily transmitted between people through respiratory droplets and contact routes. Droplet transmission occurs when a person is in close contact (within 1 m) with someone who has respiratory symptoms (e.g., coughing or sneezing) and is therefore at risk of having his/her mucosae (mouth and nose) or conjunctiva (eyes) exposed to potentially infective respiratory droplets. Transmission may also occur through fomites in the immediate environment around the infected person. Therefore, transmission of the COVID-19 virus can occur by direct contact with infected people and indirect contact with surfaces in the immediate environment or with objects used on the infected person (e.g., stethoscope or thermometer). Airborne transmission is different from droplet transmission as it refers to the presence of microbes within droplet nuclei, which are generally considered to be particles <5 μm in diameter, can remain in the air for long periods of time and be transmitted to others over distances greater than 1 m. In the context of COVID-19, airborne transmission may be possible in specific circumstances and settings in which procedures or support treatments that generate aerosols are performed; i.e. endotracheal intubation, bronchoscopy, administration of nebulized treatment, manual ventilation before intubation, turning the patient to the prone position, disconnecting the patient from the ventilator, non-invasive positive-pressure ventilation, tracheostomy, and cardiopulmonary resuscitation. There is some evidence that COVID-19 infection may lead to

intestinal infection and be present in faeces. However, to date only one study has cultured the COVID-19 virus from a single stool specimen [7]. There have been no reports of faecal-oral transmission of the COVID-19 virus to date.

Principles of IPC strategies associated with health care for suspected COVID-19 -

To achieve the highest level of effectiveness in the response to the COVID-19 outbreak using the strategies and practices recommended in this document, an IPC infection prevention and control (IPC) programme with a dedicated and trained team or at least an IPC focal point should be in place and supported by the national and facility senior management [8]. In countries where IPC is limited or nonexistent, it is critical to start by ensuring that at least minimum requirements for IPC are in place as soon as possible, both at the national and facility level, and to gradually progress to the full achievement of all requirements of the IPC core components according to local priorities [9]

IPC strategies to prevent or limit transmission in health care settings include the following -

- ensuring triage, early recognition, and source control (isolating patients with suspected COVID-19);

Clinical triage includes a system for assessing all patients at admission, allowing for early recognition of possible COVID-19 and immediate isolation of patients with suspected disease in an area separate from other patients (source control).

To facilitate the early identification of cases of suspected COVID-19, health care facilities should:

- Encourage HCWs to have a high level of clinical suspicion;
- establish a well-equipped triage station at the entrance to the facility, supported by trained staff;
- Post signs in public areas reminding symptomatic patients to alert HCWs.
- Hand hygiene and respiratory hygiene are essential preventive measures.

2. Applying standard precautions for all patients;

Standard precautions include hand and respiratory hygiene, the use of appropriate personal protective equipment (PPE) according to a risk assessment, injection safety practices, safe waste

management, environmental cleaning, and sterilization of patient-care equipment. Ensure that the following respiratory hygiene measures are used:

- ensure that all patients cover their nose and mouth with a tissue or elbow when coughing or sneezing;
- offer a medical mask to patients with suspected COVID-19 while they are in waiting/public areas ;
- perform hand hygiene after contact with respiratory secretions.

3. Implementing empiric additional precautions;

3.1 Contact and droplet precautions -

- in addition to using standard precautions, all individuals, including family members, visitors and Health Care Workers, should use contact and droplet precautions before entering the room of suspected or confirmed COVID-19 patients;
- patients should be placed in adequately ventilated single rooms. For general ward rooms with natural ventilation should be provided.
- all patients beds should be placed at least 1 metre apart regardless of whether they are suspected to have COVID-19;
- HCWs should use a medical mask.

3.2 Airborne precautions for aerosol generating -

- Airborne precautions are required to protect against airborne transmission of infectious agents.
- Preventing airborne transmission requires personal respiratory protection and special ventilation and air handling.
- Use of eye protection (i.e. goggles or a face shield) etc..

We all know that prevention is better than cure. While there is no medicine for Covid-19 as of now, it will be good to take preventive measures which boost our immunity in these times. Ministry of AYUSH recommends certain self care guidelines for preventive measures and boosting immunity with special reference to respiratory health, these are supported by ayurvedic literature and scientific publications.

Aurveda's immunity boosting measures for self care during Covid-19 Crises : Measures

to promote immunity:

1. Take Chavanprash 10gm (1tsf) in the morning.
2. Drink herbal tea, decoction(Kadha) made from Tulshi (Basil), Dalchini(Cinnamon), Kalimirch (Black Pepper), Sunthi (DryGinger) and Munakka (Rasin)-once or twice a day.Add jaggery9Natural Sugar) and / or fresh lemon juice to your taste, if needed.)
3. Golden Milk- Half teaspoon Haldi (turmeric) powder in 150ml hot milk, once or twice a day.

General Measures to enhance the body's natural defence system -

1. Drink warm water throughout the day
2. Daily practice of Yogasna, Pranayama and meditation for at least 30 minutes.
3. Use Haldi (turmeric), Jeera(cumin), Dhaniya (Coriander) and Lahsun (Garlic) in cooking.

Ayurveda's Immunity boosting measures for self care during Covid-19 Crises -

1. Nasalapplication- Apply sesame oil/ coconut oil or ghee in both the nostrils in morning and evening.
2. Oil Pulling Therapy- Take 1 tablespoon sesame or coconut oil in mouth. Do not drink, swish in the mouth for 2,3 minutes and split it off followed by warm water rinse. This can be done once or twice a day.

During Sore Throat/Dry Cough -

1. Steam inhalation with fresh Pudina (Mint) leavesor Ajwain (Caraway seeds) can be practised once aday.
2. Lavang (Clove) powder mixed with natural sugar/honey can be taken 2-3 times a day (it is best to consult a doctor if symptoms of dry cough and sore throat persist)

Some good hobbits can control the infection of Corona virus -

- Do not touch your hands to your face organs including mouth, nose and eyes.
- When you are sneezing always use handkerchief or tissue paper after tissue paper should discard and tissue paper

put in dustbin.

- Wash hands frequently with soap and water for at least twenty second.
- Wash hands and legs when coming from outside.
- Avoid gathering, do not go inside the gathered people.
- Do not shake hand to your friends or colleagues.
- Use higher source of protein in diet, fresh fruits which are rich in vitamin C.
- Take Steam inhalation every morning and evening.
- Apply coconut oil or olive oil on your hands every time you go out.
- Do warm salt water and turmeric powder gargle once or twice a day.
- Use AarogyaSetu app.

Conclusions -

By keeping ourselves fit, we can help others to remain fit. Let all of us from the educational fraternity join hands in this mission to stop the spread of Corona Virus.

Now the time has come again to follow our ancient habits and rituals to fight against pandemic disease which has occurred today and might occur in future too.

Based on the available evidence, including the recent publications, WHO continues to recommend droplet andcontact precautions for those people caring for COVID-19 patients. WHO continues to recommend airborne precautions forcircumstances and settings in which aerosol generating procedures and support treatment are performed, according to risk assessment?

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Traditional Methods to Reduce Stress and Anxiety

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Abstract -

Stress is a normal reaction the body has when changes occur. The body reacts to these changes with physical mental and emotional responses. Stress is a normal part of life. Stress can be positive keeping us alert, motivated and ready to avoid danger, it may be negative when a person faces continuous challenges without relief or relaxation between stressors. This stress response is “fight or flight response”. Stress can be reduced by a positive attitude, be assertive instead of aggressive. Learn and practice relaxation techniques such as asana, pranayama and meditation. Enough rest can reduce stress.

Key Words - Stress, anxiety, asana, pranayama, meditation and OM chanting, etc.

Introduction -

Stress - The body’s reaction to any change that requires an adjustment or response is stress or Stress is any demand placed on your brain or physical body. The body reacts to these changes with physical, mental and emotional responses. It is a normal part of life. We can experience stress from our environment, our body and our thoughts. Even positive life changes such as a promotion, a mortgage, or the birth of a child also produce stress. People can report feeling stressed when multiple competing demands are placed on them. The feeling of being stressed can be triggered by an event that makes you feel frustrated or nervous. Anxiety is a feeling of fear, worry, or unease.

In the human being life stresses are due to the death of a loved one, divorce, loss of a job, increase in financial obligations, getting married, moving to a new home, chronic illness or injury, emotional problems (depression, anxiety, anger, grief, guilt, low self-esteem), etc. but nowadays whole world facing stress and anxiety due to

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the COVID-19 pandemic which is also known as the coronavirus pandemic, is an ongoing pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The outbreak was identified in Wuhan, China, in December 2019. The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January and a pandemic on 11 March. As of 10 May 2020, 40,26,691 cases of COVID-19 have been reported in over 212 countries and territories, resulting in 2,76,894 deaths. 5,79,509 people have recovered. In India 62939 cases of COVID-19 have been reported from which 19358 people have recovered and resulting in 2109 deaths. These numbers increase continuously, which causes stress and anxiety.

The warning signs of stress - Dizziness or a general feeling of “being out of it.”, General aches and pains, Grinding teeth, Headaches, acid reflux symptoms, Increase in or loss of appetite, muscle tension in the neck, face or shoulders, Problems of sleeping, Racing heart, Cold and sweaty palms, Tiredness, exhaustion, Trembling/shaking, Weight gain or loss, Upset stomach, diarrhea, Sexual difficulties, etc. are the various physical symptoms due to the chronic stress which can wear down the body’s natural defenses.

Stress Effect on Health - The human body is designed to experience stress and react to it. Stress can be positive or negative. Positive stress keeping us alert, motivated and ready to avoid danger. When in negative stress a person faces continuous challenges without relief or relaxation between stressors. As a result, the person becomes overworked and stress-related tension builds. The body’s autonomic nervous system has a built-in stress response that causes physiological changes to allow the body to combat stressful situations.

This stress response, also known as the “fight or flight response”, is activated in case of an emergency. However, this response can become chronically activated during prolonged periods of stress. Prolonged activation of the stress response causes wear and tear on the body – both physical and emotional. Stress that continues without relief can lead to a condition called distress – a negative stress reaction. Distress can disturb the body’s internal balance or equilibrium, leading to physical symptoms such as headaches, an upset stomach, elevated blood pressure, chest pain, sexual dysfunction and problems sleeping. Emotional problems can also result from distress. These problems include depression, panic attacks, or other forms of anxiety and worry. Research suggests that stress also can bring on or worsen certain symptoms or diseases. Stress is linked to six of the leading causes of death: heart disease, cancer, lung ailments, accidents, cirrhosis of the liver and suicide, etc.

Tips for Reducing Stress - Keep a positive attitude, accept that there are events that you cannot control, Be assertive instead of aggressive, Assert your feelings, opinions, or beliefs instead of becoming angry, defensive, or passive, Learn and practice relaxation techniques; try meditation, yoga, exercise regularly. Your body can fight stress better when it is fit, eat healthy, well-balanced meals, learn to manage your time more effectively, set limits appropriately and say no to requests that would create excessive stress in your life, make time for hobbies and interests, Get enough rest and sleep. Your body needs time to recover from stressful events, Don’t rely on alcohol, drugs, or compulsive behaviors to reduce stress, Seek out social support. Spend enough time with those you love, biofeedback techniques to learn healthier ways of dealing with the stress in our life.

Simple Ways to Relieve Stress and Anxiety - Exercise, Taking Supplements, Light a Candle, Reducing Caffeine Intake, Write It Down, Chew Gum, Spend Time with Friends and Family, Laugh, etc.

AIM - In this lockdown situation, several supplements promote stress and anxiety reduction. But exercise is one of the most important things that we can do to combat stress and deal with anxiety. We reduce stress or become stress less

by doing some Traditional Indian Practices as follows:

Asana - An asana is a body posture, originally and still a general term for a sitting meditation pose. Now it extended in modern yoga as exercise, which involves reclining, standing, inverted, twisting and balancing poses. The asana has been created at different times, a few being ancient, some being medieval and a growing number recent. Some that appear traditional, such as Virabhadrasana (Warrior Pose), Parivritta Parsvakonasana (Revolved Side Angle Pose), Viparita Virabhadrasana (Reversed Warrior Pose), Surya Namaskar (Salute to the Sun).

Micro-exercises - Micro exercises mean Micro-workouts, which are the high-intensity interval training exercises including warm-up and cool down, involve engaging in several sets of short bursts of exercise, followed by a rest period between an asana.

Pranayama - Pranayama is the practice of breath control in yoga. In modern yoga as exercise, it consists of synchronizing the breath with movements between asana but is also a distinct breathing exercise on its own, usually practiced after asana. Some easy pranayama which we can do in this lockdown period as follows:

Bhastrika Pranayama - Bhastrika is an important breath exercise in yoga and pranayama. It is sometimes treated as a kriya or ‘cleansing action’ to clear the airways in preparation for other pranayama techniques. Bhastrika involves a rapid and forceful process of inhalation and exhalation powered by the movement of the diaphragm. The movement of air is accompanied by an audible sound. One inhale and exhale equals one round of bhastrika,

Kapalabhati Pranayama - This is similar “process or kriya or kapalabhati is a milder form of Bhastrika PraGayama. Kapalabhati is also called a breath of fire. The word kapalabhati is made up of two Sanskrit words: kapala meaning ‘skull’ and bhata meaning ‘shining, illuminating’. It is intended mainly for cleaning the sinuses. The Technique of Kapalabhati involves short and strong forceful exhalations and inhalation happens automatically. There are three forms of Kapalabhati: Vatakrama kapalabhati (similar to the Pranayama technique of Bhastrika, except that

exhalation is active while inhalation is passive), Vyutkrama kapalabhata (similar to Jala neti, it involves sniffing water through the nostrils and letting it flow down into the mouth and then spitting it out), Sheetkrama kapalabhata (the reverse of Vyutkrama kapalabhata, in which water is taken through the mouth and expelled through the nose).

Anulom Vilom Pranayama - This technique involves controlling subtle 'Pranic energies' of our body flowing through specific channels, the 'Ida' and 'Pingala' nadis. The control of the Prana through a regular practice of Anulom Vilom pranayama helps to balance the energies flowing through the Ida and Pingala nadis. This, in turn, stimulates the central channel called Sushumna Nadi. This helps in the elimination of free radicals and toxins from the Ida and Pingala Nadi and helps to restore a balance between the two hemispheres of the brain. This helps to purify the entire nervous system. Healing and bringing about a mental calm, peace and tranquillity.

Bhramari pranayama - The Bhramari pranayama breathing technique derives its name from the black Indian bee called Bhramari. Bhramari pranayama is effective in instantly calming down the mind. It is one of the best breathing exercises to free the mind of agitation, frustration, or anxiety and get rid of anger to a great extent. A simple technique, it can be practiced anywhere - at work or home and is an instant option to de-stress yourself.

Udgeeth Pranayama - The Omkara Chanting is called Udgeeth Pranayama. There are many common names of Udgeeth Pranayama like Omkari jap, Om chanting, Omkara chanting. Omkar Pranayama is a conscious breathing exercise with seemingly countless benefits for the body and mind! In Sanskrit, Omkar refers to the sacred sound of OM or AUM. According to the ancient Yogic texts, AUM is the sacred sound of creation. While performing this pranayama, the Omkara sound connects you with silence within you. In this silence, our brain gets vibrations to tune

in a natural frequency. There are many benefits of chanting AUM. If Omkar Pranayama is not a part of your daily routine, it should be! Maharishi Patanjali, the author of yoga sutras, says that one who chants OM receives all the divine powers of the world. OM is a natural sound. As there are different types of people speaking different languages. But there is one sound that comes from the depth of the throat and that is OM. When your lips and tongue collide then it produces different kinds of sound. OM is a natural sound that comes without any collision.

Meditation - Meditation is a practice where an individual uses a technique – such as mindfulness or focusing the mind on a particular object, thought, or activity – to train attention, awareness and achieve a mentally clear and emotionally calm and stable state.

Difference between Pranayama and Meditation - Pranayama are breathing exercises that help us to have control over our breath and Meditation is consciously concentrating the whole of your mind on one single thought or no thought at all.

Benefits of Asana, Pranayama and Meditation - Practicing these Asana, Pranayama, and Meditation gives us many physical and spiritual benefits as well: This ancient practice helps in the strengthening of the mind and complete relaxation. Asana, Pranayama helps prepare the whole body for meditation. These Asana, Pranayama and Meditation can be easily done anytime and anywhere. Hence Asana, Pranayama and Meditation are more beneficial in those days of lockdown. It helps to deal with anxiety, guilt, fear and sadness. This pranayama helps to increase strength, cures acidity, and removes tension. Even a small child of 4/5 years can perform this Pranayama, as it is easy to do.

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Study on Retail Store's Attributes and Increase in Sales of Unorganized Retailer after the Covid-19 Pandemic

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Abstract -

The objective of the study is to examine the store attributes for a traditional store in Indian context. It is not a new thing to suggest some measures to increase sales and customers loyalty after covid 19 effects, but this paper suggests some very useful and important methods to grasp customer's attention and to defeat the rivals by just amending and modifying the retail store's attributes. The only way to satisfy and gratify the customers of retail store is to give him maximum satisfaction along with adequate attention. This paper explain the required features for an ideal retail store in terms of location, infrastructure, convenience, etc... for a consumer to keep loyal to the retail store after this pandemic situation.

Keywords - Customer's Loyalty, Positioning, Retail Stores, covid 19 Pandemic

Introduction -

The total concept and idea of shopping has undergone a vast drawing change in terms of format and consumer buying behavior, lead to a revolution in shopping in India after the corona virus effect on the world. Modern retailing has entered into India as is observed in the form of recline shopping centers, multi-storied malls and the huge complexes that offer shopping, entertainment and food all under one roof. Retail stores come in all sizes and are designed in many different ways. They sell everything imaginable and some things you probably never imagined. They are as diverse as the people who shop in them, but they all have a few things in common. The owners all want to make profit and succeed. To help them in their hunt for profitability, many retailers resort to standard features designed to make their shops more visually appealing.

But after this crises a good retail store is not the one that provides adequate amenities and attributes to consumers, but it is the one that

provides not only demographic benefits but also respect the consumers demand in terms of Price, Place, Promotion and Product. Segmentation and positioning are also important for a retail store to survive in the market. The study is made to accumulate all these points in mind to give the retail store a new identity.

A store's layout is one of the key element after the world largest crises in its success—therefore, a lot of times effort and manpower go into its design. Retailers use layout to influence customer's behavior by designing the store's flow, merchandise placement and ambiance. Layouts also help retailers understand how much revenue per square foot they are making; using this information, they can properly assess the strengths and weaknesses in their merchandising mix.

Review of Literature -

Martineau [1] was the first researcher to work on store attributes. He described store attributes as factors responsible for store image formation. Further, he suggested that the store image leads to create personality of the store in the mind of customers and customers' decisions are influenced by the picture of the entire store. The image of the store is formed in customer's mind by some store attributes like: Layout and Architecture, Symbols and Colours, Advertising, and Sales personnel matched with various patterns of consumer behaviour.

Through literature review, Kunkel & Berry [2] understood that store image has increased notably in past decades but the rate of knowledge has not progressed accordingly. Kunkel et al. opined that a man selects a store for buying based on his experiences while shopping in a store. Work in this area carried out by developing behavioral concepts (influenced by societal and subculture norms) of store images formed by 12 store attributes: Price of Merchandise, Quality of Merchandise,

Assortment of Merchandise, Fashion of Merchandise, Sales personnel, Location convenience, other convenience factors, Services, Sales Promotion, Advertising, Store Atmosphere and reputation on Adjustments.

Lindquist [3] conducted a survey on empirical evidence for defining the meaning of image. He summarized the image-related attributes hypothesized by 26 scholars in the field of defining store image through store attributes. He found that following attributes were mentioned by a certain percentage of the scholars: Merchandise Selection or Assortment (42%), Merchandise Quality (38%), Merchandise Pricing (38%), Locational Convenience (35%), Merchandise Styling, Fashion (27%), Service, General (27%) and Sales clerk Services (27%).

There are some studies related to store selection based on consumer perceptions. Joyce & Lambart [4] found that consumer perceptions about the store image are likely to be influenced by the types of stores visited repeatedly in past and attributes of these stores such as Color, Lighting, Signage, Clientele, Salespeople.

Sinha & Banerjee [5] tried to know the factors of retail store selection based on the consumers' perception developed by visiting various types of stores and their observation about various services and physical parameter of these stores. Treblanche [6] identified the determining factors of store attributes influencing consumer perception about a store as: Types of Customer, Store Location, Price levels, Services offered Merchandising Mix, and Advertising and Physical facilities.

These all studies before the pandemic but after this crisis lot of the changes will take place likely

In Deloitte [7] Non-contact demand during the pandemic is expected to boost sales at smaller stores that can host smaller crowds at a time. However, supermarket chains have ensured supply of products at regular prices. Due to the pandemic's impact on consumer behavior and habits, "online-sales" are expected to witness a significant surge, even after the industry recovers. The establishment of online platforms is expected to become indispensable for offline stores, and online-offline service integration is expected to increase

Material and Methods -

Survey research design is adopted in this study which sought for respondents' opinion on issue under study. The data was collected through the use of Google form questionnaire (structured). Sampling which purely non-probabilistic was used to obtain a sample of 100 respondents from the target population of the study. Secondary sources are also captured in this study through websites, books, journals etc., relevant to the study. The data collected were organized and analyzed using the descriptive technique of simple percentage and histogram.

Results and Discussion -

The result of the analysis of the data collected on the subject under study revealed that 37% of those that look down the retail store by males, while 63% are female and majority are businessmen and women. They like visiting retail store for shopping. The respondents are of the opinion that retail store should be familiarize with convenient and reachable counters; and that there is the need for segmentation factor for its consumer. The placing and positioning of goods in the store is good attribute that influence customers favoritism; product is the most paramount elements of marketing mix. Retail store should possess good products enough so as to be able to group customers; and that a good retail should be easily reachable; very innovative and should have good price tag.

As result of the study the Indian retail market is strongly driven by the unorganized (Traditional store) retail stores and our aim was to deal with the customer expectations for store attributes in unorganized retail scenario. The general customer profile easily reflect that the customers visiting the unorganized store usually visit for grocery products. Also such customers do not travel much to visit the retail store. As per the responses obtained store attributes have a very strong relationship with the customer perceptions in unorganized markets. Discounts showed the strongest relation, product assortment and product availability almost equally showed a strong relationship with customer perceptions.

Then the Retailers attitude, strong Image and other services showed the relationship. The results reflect that the retailers in unorganized markets have to cater a customer which is more price sensitive

and get attracted towards the discounts being offered to him. More over atypical emphasis should be given on the product assortment in the store and the availability of the desired goods of the customers. The customer purchasing grocery and consumer durable goods emphasize more on store attributes rather than in chemist or cosmetic products.

But after the covid 19 effect, costumers are also thinking about other attributes like health and safety while visiting the store. with the newly associated customer base, retailers should focus on a rebalance that strengthens rather than weakens their position in the market. Also having built a solid reputation, retailers should focus their supply chain to only work with partners who also stand by similar principles.

Conclusion -

Given the empirical results reported above, retail store attributes influences sales. This implies that retail store owners should target the improvement and development of retail attribute, positioning; so as to maintain and attract prospective customers. Therefore, friendly business environment is one of the pre-requisite for growth and promotion. Meaning development and improvement of sales is partly if not wholly dependent on better business environment and conditions; better store design and layout should be looked into; customers complain and suggestion should be given priority that will enhance loyalty

The results show that the customers purchasing grocery products emphasize of store attributes like product assortment, product availability and retailers attitude. Similarly for other categories different store attributes emphasize different product categories. So, Retailers in unorganized markets should dealing with different categories should emphasize on different store attributes depending upon the type of

customers he deals with. Another very important result of the study is the moderating effect of the “distance travelled by the customer to reach the store” on the customer perceptions. The results emphasized that the except Retailers attitude and the other services all other store attributes showed a significant relation with customer perceptions when moderated with the Distance travelled.

Form all above results retail has to focus on normally after pandemic looking to avoid crowds, provided these alternate options can ensure that goods are still being sold and customers are not missed. As well as retailers need to be careful and ensure that they have the appropriate allocation of resources to not miss out on any opportunities. Careful planning will be needed to avoid stock issues after the epidemic as some consumers splurge.

These finding strongly emphasize that when customer wants prefers store attributes he even travels long distances to purchase that product. This also reflects the store loyalty factor of the customer. All these when kept under consideration can surely meet customer expectations and thus make your customer loyal.

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Survey on Status and Experience of Students for “Learn from Home” during COVID-19 Lockdown in April 2020

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Abstract -

The purpose of this survey is to check the status and impact of learning from home concept during corona virus lockdown on students of School of Nanoscience & Technology, Shivaji University, Kolhapur. There are about 250 students from all classes from B.Sc.-I to M.Sc.-II taken part in this online survey conducted by Department. Students are having mixed reaction about learning from home concept during this lockdown period as well as some of them don't have proper electricity and high speed internet as the majority of the students live in village side. Most of them still inclined towards learning and interacting with faculty teachers to understand the subject through online platform. This new concept is bit different than regular classroom teaching and students still trying to adapt it with technical struggles and understanding.

Keywords - COVID 19, Lockdown, Technology Adaption, Teaching, Learning, Students, Impact, Survey

Introduction -

As cases of corona virus surged in country, Indian government has decided to implement lockdown from 24th March 2020 as precautionary measures against COVID-19 spread. There is closing of all Schools, Colleges and University along with public transportation, malls, entertainment sector and businesses except essential services. There is need to continue the learning process during this lockdown that's why all the teaching learning process shifted to the online “Learn from Home” concept to continue the education process during this period by using different online platform like Moodle, SWAYAM, online lectures, whatsapp groups study etc .

To check its status, impact and student's view about this concept, it is decided to do a survey of these students from different classes of School of

Nanoscience and Technology (SNST), Shivaji University, Kolhapur.

Methodology -

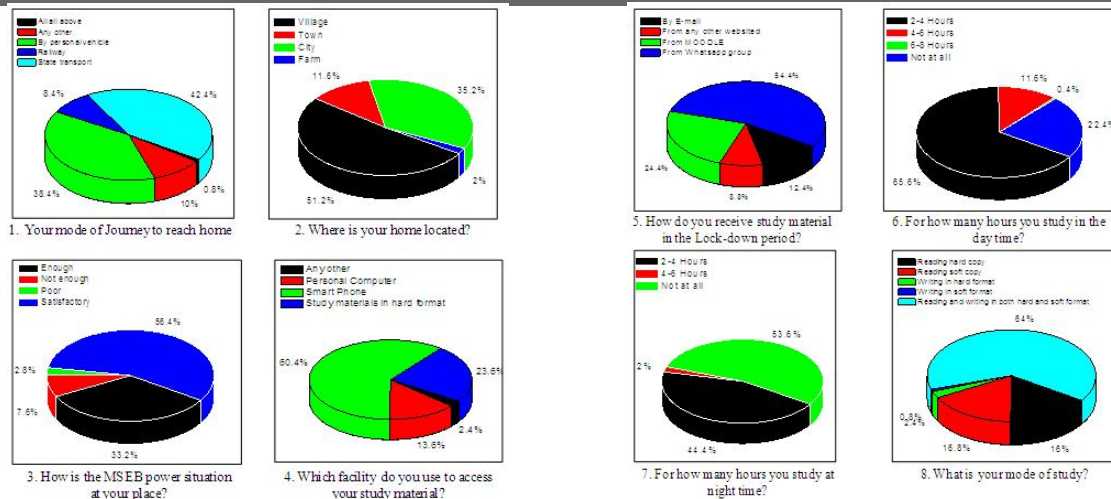
Online questionnaire made and then sent to all students of School. About 250 students from all classes B.Sc.-I to M.Sc.-II, age between 19 to 25 years were taken part in this survey. In the study they share their view about this learning from home during lockdown through online questionnaire made by SNST faculty. The questions made considering the location of students, access to technology to get online education, experience with this online learning, examinations, faculty interaction and technical problem etc.

This study material?

Learning from Home concept experience, its accessibility, understanding, adaptation, teaching, learning, student engagement with faculty:

- How do you receive study material in the Lock-down period?
- How many hours you study in the day time?
- How many hours you study at night time?
- What is your mode of study?
- Which mode of study you would like?
- What do you expect about your final examination?
- Did you try a few more add-on online courses through the portal like SWAYAM in the lock-down period?
- How much fruitful is Lock-Down academically?
- How do you rate the LOCK-DOWN at your place?
- How easy do you feel in interaction with the faculty through online mode?

Results and discussions -



The technical facilities, geographical problem (fig 1 to 4): As per result from survey, when there was questions related to the location asked, most of students went through state transport to their native place when university closed due to lockdown, in that more than 50% students are from village area and 2% live at farm side and only 35.2% are from city area and 11.6% from small town. Most of the village area doesn't have good and continuous electricity supply due to load shading and single phase electricity supply but here 56.4% students having satisfactory electricity supply and 33.2% said enough for use which is good to support online learning process but collectively 10% don't have enough or have poor electricity supply which also should be noted. Regarding to the technical support more about 60% students use their smart phone to access online learning while 13% have their personal laptop or desktop but there are also some students go through study material in hard copy format which are given by teachers, printed from soft copies provided on learning platform or the books recommended. So there are still 23% students not able to access online learning easy or continuous manner they are still depend on hard copy format to get notes.

Learning from Home concept experience, its accessibility: As Learn from home process need an online platform to provide communication, discussion and supplement of study material. More than 54.4% students received this learning from whatsapp study group (fig 5) created by faculty and class president students according to their class, student also directly discussed queries and other academic problems with subject teacher freely. All the required study material provided to the students through these groups continuously. Second favorite platform of student is Moodle which is open source learning platform connected to our University. 24.4% student use moodle to receive study material and learning purpose (fig 5). Respective subject teacher uploads the entire study material, conduct test and also provide important links through this platform to students, students can access and download them through Moodle app. 12% received it through direct email after discussion with subject teachers. Websites also provides to the students to learn more about study.

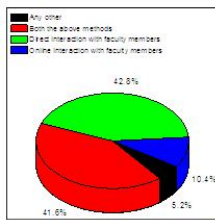
As per the study students tend to study during day time rather in night time (fig 6, 7) among that most of them about 65.6% do study for 2 to 4 hours during day time (fig 6). On the other hand students who tend to study during night time about 44.4% also do study for 2 to 4 hours only from whole day (fig 7). Mode of the study and study material of most of the student is combination of both soft and hard copy format 64% students read and write/ study in both form (fig 8) followed by reading only soft copy format.

Understanding, adaptation, teaching, and learning and student engagement with faculty

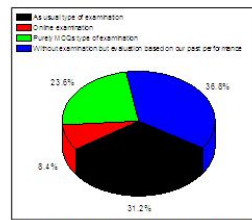
- for next question segment which are consider keeping above points gave following results , when there is question regarding to interaction with faculty teachers regarding to subject understanding or to solve queries 42.8% student still preferred to direct interaction with teachers while about 10% satisfied with online interaction with teachers but a big group of students about 41.6% wanted interaction with teachers through both direct and online way (fig 9). This is show that student are still comfortable and preferred teacher interaction directly or indirectly in the learning process.

During this lockdown there is big question still there for how to conduct exams, when this question presented to students, 36.8% replied that they want final exam without examination but evaluation based on their past performance (fig 10). On the other hand 31% still preferred usual way type of direct examination. Some are also need a option like MCQ based final examination and also online format.

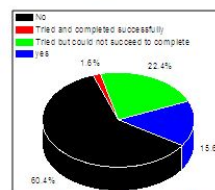
As most of the student preferred interaction of the teacher for learning procedure, there is a question related to the use of add-on online courses through the portal like SWAYAM during this learn from home concept. Government and Universities already provided many learning add on portal to the students.



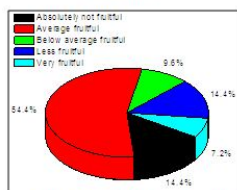
9. Which mode of study you would like?



10. What do you expect about your final examination?



11. Did you try a few more add-on online courses through the portal like SWAYAM in the lock-down period?

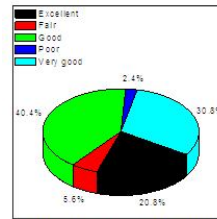


12. How much fruitful is Lock-Down academically?

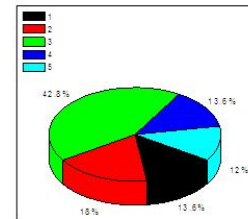
As per study about 60% student didn't try to use these type of online add on online course portal which is show student still inclined towards direct teacher interaction for learning purpose (fig 11) among which 22.4% tried it and liked it while 1.6% not able to complete it. When there was view about how they feel how fruitful is Lock-Down academically , 54% felt it average fruitful 14%

thinks less fruitful but 14% students didn't feel it fruitful in any manner (fig 12) which shows that they preferred regular academic study .

To understand the lockdown status at their place this may doing impact on their physiological point of view, as we asked students to rate the lockdown status at their place 40% replied with good rating followed by 30% with very good implementation rating.



13. How do you rate the lock-Dow at your place?



14. How ease do you feel in interaction with the faculty through online mode?

There are some who also rated it excellent about 20%, only about 8% rated it as poor implementation which shows that they have positive inclination towards lockdown measures (fig 13).

Lastly when we asked students how easy or comfortable do you feel in interaction with the faculty through online mode in 1 to 5 rating during this lockdown period, about 42.8% having average satisfactory rating , followed by 18% good rating and 13.6% excellent rating, but still about 12% not consider it good or satisfactory (fig 14).

Conclusion -

As this lockdown is sudden yet necessary, students are still struggling to adapt this new “Learn from Home” concept due to many problems like technological and geographical barriers. This study also concludes that student still preferred and comfortable learning subject through direct or indirect interaction through teachers and inclined towards usual way of teaching learning. For proper implementation of this concept it required time and better understanding and providing user-friendly technology to both teacher and students considering all barriers. Both teacher and students are trying their best to adapting and learning this concept for better education process.

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Impact of COVID-19 on Agriculture – A Review

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Abstract -

COVID 19 pandemic endangers both lives and livelihoods. The disease is easy to spread. This is no longer a regional issue it's a global problem that demands a global response. We know it'll eventually withdraw, but we don't know how easily that'll happen. We do know that this will affect important food supply and demand components. Border closures, quarantines, and economy, supply chain, and trade disruptions may limit people's access to adequate and nutritious food sources, especially in countries hit hard by the virus or already affected by high rates of food insecurity. We expect food supply chains to disrupt by May. Agriculture, fisheries and aquaculture sectors are especially affected by restrictions on tourism, restaurant and cafe closures and suspension of school meals.

Keywords - agriculture, food, farmer

Introduction -

In any case, the poorest and most vulnerable parts of the population including refugees and the homeless would be the most impacted. Countries in protracted crisis are still suffering from underinvestment in public health which would intensify the effects of the pandemic. About 820 million people worldwide are actually suffering chronic hunger-not consuming enough energy to lead normal lives. Often vulnerable groups include small-scale farmers, pastoralists and fishermen who may be prevented from working their fields, from caring for their livestock or from fishing. They will also face market access problems in selling their goods or buying critical supplies, because of higher food prices and reduced purchasing power. Informal laborers in harvesting and manufacturing would be hit hard by work and income losses.

Discussion -

The food supply chain is a complex network

involving farmers, customers, agricultural and fishery inputs, manufacturing and storage, transportation and marketing etc. Blockages to transport routes are especially obstructive for supply chains of fresh food and can also contribute to increased rates of food loss and wastage. Restrictions on transport and quarantine measures are likely to hinder market access by farmers and fishermen, curb their productive ability and prohibit them from selling their produce. Labour shortages may interfere with food production and processing in particular for labour-intensive industries (e.g. crops).Price spikes are not expected in major staples where supply, stocks and processing is capital-intensive, but are more likely in very short-term, perishable commodities for high-value commodities, especially meat and fish. At the onset of the COVID-19 outbreak, countries around the world have started to introduce a range of policy initiatives aimed at preventing further transmission of the disease. Policies restricting the free movement of people, such as seasonal workers, may have an effect on food production, influencing global market prices. Measures to ensure adequate safety standards in food factories will slow down its production and thereby affect agricultural economy adversely.

The Indian Finance Minister declared an INR 1.7 trillion package immediately after the nationwide lockdown was announced, mainly to shield the vulnerable parts (including farmers) from any adverse impacts of the Corona pandemic. The announcement included advance release of INR 2000 to farmers' bank accounts as income support under the PM-KISAN system, among a slew of benefits. The government also increased the pay rate for NREGS employees, the biggest pay guarantee system in the world. Pradhan Mantri Garib Kalyan Yojana was declared under the special scheme to take care of the needy

population. Additional allocations of grain were also declared for registered beneficiaries during the next three months. A separate PM-CARES (Prime Minister for Citizen Assistance and Relief in Emergency Situations) fund has also been declared for cash and food assistance to individuals working in the informal sector, mainly migrant workers.

The Reserve Bank of India (RBI) has also announced concrete steps resolving the “debt servicing burden” caused by the COVID19 pandemic. Agricultural term and crop loans were given a three-month moratorium (until May 31) by banks with a 3 percent concession on crop interest rates up to INR 300,000 for good repayment performance borrower. This is India’s peak of rabi season and crops such as wheat, gram, lentil, mustard, etc. (including paddy in irrigated tracts) are at harvestable or almost mature level. The migration of workers from a few parts to their native places has also triggered panic buttons, as they are crucial in storage and marketing centers for both harvesting operations and post-harvest handling of produce.

The most important task for government during the lockdown era is to make food grains, fruits and vegetables and other vital products accessible to customers, both in rural and urban areas. It is of utmost importance that the supply chain work smoothly, with appropriate safety precautions for the people involved. The transport of public distribution system (PDS) products by rail and road to last-mile delivery agents must be maintained by the respective government agencies. The distribution of commodities to vulnerable communities must be effectively monitored while maintaining prescribed guidelines and procedure, particularly of social distancing. During any catastrophe or pandemic scenario the poor parts of society are usually the hardest hit. With about 85 percent of Indian farm households being small and marginal farmers, and a large part of the population being landless farm workers, welfare initiatives to mitigate any COVID harm would undoubtedly assist them with genuine implementation. However, people living on farming and allied activities, especially those who lose their income from informal jobs during this lockdown period, have to be provided with alternative avenues before the economy bounces back.

Investments in main logistics must be improved to maintain demand for agricultural commodities. In addition, e-commerce and manufacturing companies and start-ups with effective strategies and opportunities need to be promoted. Small and medium-sized businesses, working with agricultural and allied-sector raw materials or otherwise, do need special attention so that the rural economy does not collapse.

The Government must create the availability of agri-inputs, dedicated toll-free helplines/call centers (in local/vernacular languages) to answer questions relating to the announced government initiatives and addressing farmers’ grievances, in addition to providing advice on farm operations. Agriculture in India is a state issue, and policies and programs vary from one state to another, as has been observed in recent years. Agri-inputs – plants, fertilizers, agro-chemicals, and so on – need to be pre-positioned for easy access. Private sector will play a significant role with required policy support. Relaxation of standards by Agricultural Produce Market Committees (APMCs) enabling farmers to sell their produce beyond the market yards defined would certainly ease farmers’ burdens. The largest share of potential budget allocations will naturally be allocated to the health sector under the COVID19 pandemic, a health crisis of unimaginable proportions. Structural reforms such as land leasing, contract farming and private agricultural markets etc., have long been advocated to introduce increased investments into the agricultural sector and move its development forward. Nevertheless, there has been no consistent enforcement by state governments of these rules, and therefore the full potential of the sector is unrealized. A post-COVID situation offers the rare opportunity for a healthy community to repurpose the current food and agriculture policies. There have been global worries, rather speculations, about restrictions by a few global players on exports of agricultural commodities. India’s trade surplus in commodities such as rice, milk products, tea, honey, horticultural products, etc. will take advantage of opportunities by exporting these goods with a sound agricultural export policy.

Conclusion -

All walks of life have been affected by the current health crisis around COVID-19. The goal

of nations has been to protect the lives of people suffering from the epidemic, as well as frontline health responders. Governments have been swinging into action after an extraordinary situation created by the Corona virus attack. Good news is that India's government has now increased its focus on nutrition (apart from food) safety and income for farmers (instead of increasing farm productivity). Changing consumer behavior with appropriate programs and incentives already features on the agenda. The current system of policy incentives that benefit the two major staples of wheat and rice needs to adjust for all of these to happen. The design of agricultural policies, post-COVID19 scenario, must include these imperatives for a transformation of the food systems in India.

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A Review of an Individual Role in Prevention of Corona Virus Infection (Covid -19)

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Abstract -

Coronavirus disease 2019 this is an ongoing global health emergency. The main object of this review of research paper is to be providing individual role in prevention of CORONA virus infection. It is very important to management and controls such type of disease from the community which is spread from primarily from saliva droplets or from nose discharge or from infected persons coughing or sneezing. Till date there is no such kind of vaccines or there is no any medicines or any specific treatment to cure COVID- 19. The peoples who are infected from COVID-19 suffering from mild to moderate respiratory illness also older people like who are suffering from medical problems like Cancer, Diabetes, Cardiovascular disease, Chronic respiratory disease which are more likely to produce serious illness. COVID-19 disease caused by SARS-CoV-2 means severe acute respiratory syndrome coronavirus 2

Key words - COVID- 19, Novel coronavirus pneumonia (NCP),(SARS-CoV-2), Coronavirus

Introduction -

COVID-19 originated from Wuhan, China in December 2019 and they have confirmed that the new virus had been identified from the corona virus family and this new disease is named as 2019-nCoV, A lower respiratory tract disease that is novel coronavirus pneumonia (NCP) later on by International Committee on Taxonomy of Viruses was renamed it as SARS-CoV-2 by

The name itself describes CORONA Virus - 2019 means COVID-19 World Health Organization recommended the name as COVID-19. A study conducted by a group of clinicians and scientists from University of Hong Kong who's provided a first evidence for transmission of human-to-human of SARS-CoV-2 [1]. The author describes that how the COVID -19 spreads from person-to-person

transmission in a family [1]. COVID -19 that is Coronaviruses are single-stranded enveloped RNA viruses which are zoonotic in nature and showing symptoms ranging from similar to the common cold to more severe respiratory, neurological and hepatic, symptoms [10].

Mode of Transmission -

As we know that respiratory infections has been transmitted through Droplet transmission it is occurred when person is in close contact that is within 1 meter with another person who's having coughing and sneezing then the risk is having from persons eyes, mouth or nose with infected persons droplets. MERS, SARS such kind of disease mainly transmitted though close contact with infected person via respiratory system from cough and sneezing; it is also transmitted through discharge from nose from infected peoples. Some animals like Cattle, Bats, Cats, and Camels may be the hosts for coronaviruses [2].

Symptoms -

- Fever.
- Sore throat.
- Loss of speech or movement.
- Loss of taste or smell.
- Dry cough.
- Aches and pains.
- Tiredness
- Diarrhea.
- Headache.
- A rash on skin, or discoloration of fingers or toes
- Difficulty breathing or shortness of breath.
- Conjunctivitis.
- Chest pain or pressure

Preventive measures -

To reduce transmission some practice have been discussed as wearing masks, avoid public contact, hygiene practice of hand, quarantine, to

avoiding direct contact with public. [2].

To prevent infection of COVID-19 is the best way to educate people for the hygiene practice to slow down the infection. Educate peoples to spread information that the disease it causes and how it spreads.

Followings are the way of preventives measures like:

- Avoid touching to your face, nose, eyes.
- Wash your hand regularly through alcohol base sanitizers or soap and water
- at least maintain 1 meter distance
- Avoid crowding
- Cover your nose and mouth while sneezing and coughing.
- Use face masks to avoid spreads
- Stay home stay safe
- Practice physical distancing
- Avoid Travelling

Instruct the people regarding the terms like what is suspect case, confirmed case, physical distance, Close contact ,case isolation, follow-up of contacts, environmental disinfection, environmental disinfection etc.[3].Increasing knowledge of including knowledge training for prevention and control, protection of confirmed cases, reduce nosocomial infection, control, isolation, disinfection[4,5].(IPC)that is Infection preventive and control measures that may reduce the risk of Covid-19 exposure include covering while coughing and sneezing with tissue paper and which to be disposed in a proper way, use of face masks, Washing of hands regularly with sanitizer which contain at least 60% alcohol or washing of hands with the help of soap and water, Avoiding contacts in between infected persons or maintain appropriate physical distance stop oneself from doing the things like touching to nose, mouth, nose with unwashed hands. [6].Till date there is no vaccines yet developed for the prevention of COVID-19 for the population so the best way of prevention is to avoid exposure to the virus. [7].The world health organizations that is WHO also issued a guideline on COVID-19 for the use of face masks in the community, care during at home and in the health care settings of COVID-19 [8].In WHO it is also suggested use proper use of masks and its disposal is an important for to avoid mode of transmission or to avoid increase risk of transmission, In WHO

it is also documented that it is also suggested that for the health care workers are to recommended to use of certified N95 or FFP2 that is a particulate respirators to avoid such disease when providing any care to the suspected or confirmed cases. This guideline also suggest that the persons or individuals with having respiratory symptoms are advised to use a medical masks both in home care and in health care settings but the people or individual who are not showing any respiratory symptoms or without respiratory symptoms is not required to wear medical mask in a public places or when in public [8].Patient who is cured from COVID-19 should be discharged after doing his chest radiograph and it has cleared and the persons or patients two specimens turn negative within 24 hours.[9].

Conclusion -

This review study describes the current research response on the outbreak of COVID-19. This study mainly focused on the prevention and control measures of the infection of COVID-19 from persons to persons and giving an idea to the people how to avoid transmission of COVID-19 and taking care of self and others also.

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COVID -19 and its Long-term Impacts on IT Industry

Chetan Metkar

Introduction -

The whole world is taken by a storm of a small virus called as Covid-19. Numerous lives are lost and a greater number of people suffer from direct or indirect impact on their health due to this virus.

The virus led many countries to a forced lockdown which in turn shut down their economic activities leading to massive impact on economic operations for businesses of all shape and sizes.

The IT industry is also no exception. There are a lot of changes that the IT industry has seen over the last 2-3 months. The IT industry has a lot of sectors like Service sector, BPO's, Product Companies, startups etc. We would take a generic look across these industries. These changes would leave a long-lasting impact on how the IT industry operates and how the employees work within the company.

Impact on Employers -

With the sudden changes in the business scenarios, all the companies in the world are going conscious of their spending and cost structures. Companies are looking to increase their runway of cash by reducing costs, shutting down expansions or new market initiatives. This would also lead to restructuring of employees based on their criticality to the core business and the future direction of the company. "working from home" will be the new normal for the employees of India's largest IT Company, Tata Consultancy Services (TCS), even after the lockdown comes to an end. By 2025, only 25% of employees will be needed in office at any given time and offices will only need 25% of their total strength on any given day.

The major impact can be divided into following broad categories:

Impact on Office space -

For many of the companies in the IT sector, one of the high cost items is rent for real estate for Massive, Cushy and lavish office spaces to house

in 1000's of employees. These office spaces are located in massive IT parks and the rents are exorbitant to justify the location and facilities available.

With COVID- 19, with most of their workforce operating from remote barring very few critical staff, employees have realized that they can manage a lot of employees remotely without everyone being present at the office location.

This will in turn reduce the cost for the employers and they can pass on some of these benefits to employees in the long term once the situation normalizes.

Skills and Hiring Policies -

Companies will change their hiring practices to more remote interviews and look for more global workforce. New remote culture can allow companies to hire employees with better suited skills but have location constraints. This will also unlock very specialized skills to get more demand across the world to drive best talent to get higher attention and better remuneration than of local standards.

It will also enable the company to function with round the clock support with employees in different geographies working with the company.

Work Culture -

Work culture earlier used to be defined by employees coming together and celebrating success, rewards and festivals. The remote structure would change this going forward. Employers need to engage more with the employees have more across the team meetings like Town Halls to keep the employees motivated and aligned to the company values.

HR would need to keep monitoring and engaging with employees to make sure of their well-being and the performance is not affected due to cultural changes. Information flow and Transparency would be key values for all the

companies going on remote operating mechanisms.

Office timings; The companies might want to take advantage of employees not traveling back and forth to the office from home to boost productivity of the employees. This would be a time saved by employees and companies can extend the working hours to uncover more efforts from employees

Security and Trust -

As the IT sector deals with a lot of financial and confidential data of their customers, companies need to make sure that all the requisite safeguards and measures are in place with the employee's devices and networks. This adds another level of complexity to maintain data secured across multiple devices and geographies.

The Employee devices need to be added with software to protect the device and data for their customers. Security teams need to update and keep track of all the devices to maintain required levels of protection in place

Monitoring and tracking -

Employers are always concerned about the productivity of the employees to keep the workforce on track for organization level success. With many of the team members possibly going remote, employees need to track the work that employees are putting in so that they can take corrective actions.

Time tracking and sheets are already prevalent in the Contract employee or freelancer domain, companies might even think about these tools for permanent employees as well.

Apart from these regular updated meetings with supervisors and managers would be done to measure the performance and keep the work flowing across the organization.

Impact on Employees -

With the sudden dynamics changes in the work situation, many of the employers across the world are opting for cutting costs via measures like payment deferrals, layoffs or furloughs.

This has put psychological pressure with everyone still retaining the job and job security for many of the employees is becoming one of the main concerns. This is further exacerbated as the whole industry is facing this issue and very few companies are hiring new employees.

Employees still in the organization are trying

hard to cope with the new work conditions as many of them are not very used to working remotely and adapting to the new reality of the job along with meeting and exceeding expectations of performance to prove worth in the company.

Employees are facing various challenges and opportunities. Major areas can be classified as follows:

Home is the new Workplace -

With the house being the new work environment, there are new realities that the employees have to face. This increased the hours available for the work. The lines of Office and Home are getting blurred thus blurred lines between work and leisure is blurred. Employees are not able to separate out the working hours and the office hours. Employees are also carving out a space in the house to work from along with managing kids and personal lives. Another aspect to this is there isn't a dedicated space at home where one can work, and internet or power glitches can lead to loss of productivity.

This will also allow employees to stay in their preferred cities/ locations with better houses and facilities with lesser costs. This will allow some reduction in strain on the housing costs near the IT hubs.

Time Management -

The Commute is reduced to zero for people working from home. So, employees can see it as a benefit from working from home. This enables more time to put in work or other household chores. The reality of this change that employee are always online and expectations for working odd and long hours lead to more fatigue to the employees. This also adds flexible timing schedules for employees to follow as per their needs.

Devices and Tools -

With many companies already moving to Laptops than Desktops, for them it is easier to allow all the employees to work from their home. For the industries like Services and BPO's where workers do not have personal devices but shared ones, it becomes difficult to provide necessary devices for smooth functioning of the organization from remote places. Going forward many of the companies might opt for Bring your own Devices policy to facilitate easier workforce management and also from a cost management perspective.

Communication -

With Employees generally working on multidisciplinary projects with multiple people involved, communication and keeping in sync is always a challenge. This gets more important with everyone working remotely. To keep in sync with all the work and collaboration with other employees is very important to get things right. This will lead to more time spent on communication, meetings. This has already led to increased usage of collaboration and video conferencing software like Zoom, Slack, Microsoft teams etc.

Collaboration work -

Many times, employees need to get together to collaborate and ideate to find solutions to the problems that company is facing. This is in turn hard to do even in personal face to face meetings. With everyone being remote, this becomes even harder to get everyone together to find the right solutions to the problems. The tools available are becoming more sophisticated but the human collaboration style will need to adapt to the new normal. This might take some time for everyone to be as productive in collaborative work as in person.

In Summary, the world will try to adopt the aftereffects of Pandemic. This will have a long-lasting impact on the employee and employer relationship with the new realization of Work from

home/ remote work cultures. Even if not all the companies opt for this change, in the longer-term substantial amounts of employees will be remote and thus leading to a much more global environment for the companies and the employees to operate in. It would be interesting to see if the companies pass on the cost savings benefits of remote working to employees in the longer run as employees are basically taking care of infrastructural costs for the employers.

The opinions and views expressed in this blog are those of Chetan Metkar, and do not necessarily represent the views of his employer.

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Effect of outbreak of Corona virus on Education/Student psychology

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Abstract -

The COVID 19 pandemic has affected educational systems worldwide, leading to the near-total closures of schools, universities and colleges. As of 10 May 2020, 1.268 billion learners are presently affected due to school closures in response to the pandemic. According to UNICEF monitoring, 177 countries are presently implementing nationwide closures and 13 are implementing local closures, impacting about 73.5 percent of the world's student population.¹ On 23 March 2020, Cambridge International Examinations (CIE) released a statement announcing the cancellation of Cambridge IGCSE, Cambridge O Level, Cambridge International AS & A Level, Cambridge AICE Diploma, and Cambridge Pre-U examinations for the May/June 2020 series across all countries.² International Baccalaureate exams have been canceled.³ In India also few exam canceled due to pandemic covid-19.

Background -

Efforts to stem the unfold of COVID-19 through non-pharmaceutical interventions and preventive measures such as social-distancing and self-isolation have prompted the widespread closure of primary, secondary, and tertiary and schooling in over hundred countries.⁴

Previous outbreaks of infectious diseases have prompted widespread school closings around the world, with variable levels of effectiveness.⁵ Mathematical modelling has shown that transmission of an outbreak may be delayed by closing college. However, effectiveness depends on the contacts children maintain outside of college.⁶ School closures may be effective when enacted promptly. During the 1918-1919 influenza pandemic in the United States, school closures and public gathering bans were associated with lower total mortality rates. Cities that implemented such interventions earlier had bigger delays in reaching

peak mortality rates.⁷ Schools closed for a median duration of 4 weeks according to a study of 43 US cities' response to the Spanish Flu. School closed were shown to minimize morbidity from the Asian flu by 90% during the 1957-58 outbreak,⁸ and up to 50% in controlling influenza in the US, 2004-2008.⁹

They also looked at the dynamics of the spread of influenza in France during French school holidays and noted that cases of flu dropped when schools closed and re-emerged when they reopened. They noted that when teachers in Israel went on strike during the flu season of 1999-2000, visits to doctors and the number of respiratory infections dropped by more than a fifth and more than two fifths respectively.¹⁰

Hazard controls -

For schools and childcare facilities, the U.S. Centres for Disease Control and Prevention recommends short-term closure to clean or disinfect if an infected person has been in a colleges l building regardless of community spread. When there is minimal to moderate community transmission, social distancing strategies can be implemented such as cancelling field trips, assemblies, and other large gatherings such as physical education or choir classes or meals in a cafeteria, increasing the space between desks, staggering arrival and dismissal times, limiting nonessential visitors, and using a separate health office location for children with flu-like symptoms. When there is substantial transmission in the local community, in addition to social distancing strategies, extended school dismissals may be considered.¹¹

Timeline: based on covid -19 -

• **On 26 January**, China instituted measures to contain the COVID-19 outbreak which included extending the Spring Festival holiday to contain the outbreak. Universities and schools around the country closed.¹²

- **On 23 February**, Iran’s Ministry of Health announced the closure of universities, higher educational institutions and schools in several cities and provinces.¹³

- **On 3 March**, UNESCO released the first global numbers on school closures and affected students. It reported that 13 countries had enacted preventive measures including the temporary closure of schools and universities, impacting 290.5 million students around the world. In reaction, UNESCO called on countries to support affected students and families and facilitate large-scale inclusive distance learning programmes.¹⁴

- **On 4 March**, the Italian government ordered the full closure of all schools and universities nationwide as Italy reached 100 deaths. In doing so, Italy became one of 22 countries on three continents which had announced or implemented school closures.

- **On 5 March**, the majority of learners affected by COVID-19 emergency measures were located in China, with 233 million learners affected, followed by Japan at 16.5 million and Iran at 14.5 million.

- **By 10 March**, one in five students worldwide was “staying away from school due to the COVID-19 crisis” while another one in four was barred from higher education institutions.¹⁵

- **On 13 March**, governments in 49 countries announced or implemented school closures, including 39 countries which closed schools nationwide and 22 countries with localised school closures.

- **By 16 March**, this figure increased from 49 to 73 countries according to UNESCO.

- **By 19 March**, 50% of students worldwide were affected by school closures, corresponding to nationwide closures in 102 countries and local closures in 11 countries affecting 850 million children and youth.¹⁶

- **By 20 March**, over 70% of the world’s learners were impacted by closures, with 124 country-wide school closures.

- **By 22 March**, Janta curfew in INDIA. After 22 march all school and colleges closed in India due to covid-19.

- **BY 24 March**, over 100% of the school and colleges are closures in India due to covid19.

- **On 26 March**, all New Zealand schools

and universities have been closed down across the country. The government has imposed a two-week holiday, allowing schools to transition to forms of distant teaching as soon as possible. Universities have closed for one week, but resumed with online teaching afterwards. Other school services remain open, but teaching is restricted to distant learning.

- **By 27 March**, nearly 90 per cent of the world’s student population was out of class. Regions with schools remaining open included Taiwan, Singapore, Australia, Sweden, and some U.S. states.

- **By 29 March**, more than 1.5 billion children and other students were affected by nationwide school closures. Others were disrupted by localized closures.

- **Until 6 April**, holidays were extended in all secondary schools of Turkmenistan. An order signed by the Ministry of Education as a preventative measure aims to prevent the spread of respiratory diseases in connection with the WHO corona virus pandemic.

Countries and territories closures based on covid-19	Number of learners enrolled from pre-primary to upper-secondary education as data record	Number of learners enrolled in tertiary education programmes as data record	Additional information required	if	See also	Ref
 Algeria based on covid-19	9,492,542	742,640			COVID-19 pandemic in Algeria	-
 Argentina based on covid-19	11,061,185	3,140,960			COVID-19 pandemic in Argentina	-
 Armenia based on covid-19	417,832	302,891			COVID-19 pandemic Armenia	-
 Bangladesh	16,758,304	3,120,039	Schools are closed		COVID-19	-
 Belgium based on covid-19	2,427,733	526,720	Schools are closed but universities remain open.		COVID-19 pandemic Austria	-
 Denmark	1,182,294	312,379	Both schools and universities are closed.		COVID-19 pandemic Denmark	-

Socioeconomic impact of the 2019-20 corona-virus pandemic:

School closures in response to the COVID-19 pandemic have shed a light on numerous issues affecting access to education. As of March 12, more than 370 million children and youth are not attending school because of temporary or indefinite country wide school closures mandated

by governments in an attempt to slow the spread of covid-19. As of 29 March, nearly 90% of the world's learners were impacted by closures⁴

From disadvantaged backgrounds, who may not have the parental support needed to learn on their own? Working parents are more likely to miss work when schools close in order to take care of their children, incurring wage loss in many instances and negatively impacting productivity. Localised school closures place burdens on schools as parents and officials redirect children to schools that are open.

Distance learning -

Online learning has become a critical lifeline for education, as institutions seek to minimize the potential for community transmission. Technology can enable teachers and students to access specialized materials well beyond textbooks, in multiple formats and in ways that can bridge time and space.

In response to the pandemic, many schools moved to online distance learning via platforms like zoom application, Google meet, Google classroom applications. The guide an education response to the COVID-19 Pandemic for distance educations.

Unequal access to technology -

Lack of access to technology or fast, reliable internet access can prevent students in rural areas and from disadvantaged families. Lack of access to technology or good internet connectivity is an obstacle to continued learning, especially for students from disadvantaged families. In response to school closures caused by COVID-19, UNESCO recommends the use of distance learning programmes and open educational applications and platforms that schools and teachers can use to reach learners remotely and limit the disruption of E-learning educations.

To aid in slowing the transmission of COVID-19, hundreds of libraries have temporarily closed. In the United States, numerous major cities announced public library closures, including Los Angeles, San Francisco, Seattle, and New York City, affecting 221 libraries. For students without internet at home, this increases the difficulty of keeping up with distance learning and not clearing problem of students.

Childcare -

A school closure puts a strain on parents and

guardians to provide childcare and manage distance learning while children are out of school. In the absence of alternative options, working parents often leave children alone when schools close and this can lead to risky behaviours, including increased influence of peer pressure and substance abuse.

Impact on formal education -

Primary

Primary or elementary education typically consists of the first four to seven years of formal education.



An empty classroom in closed elementary school due to COVID-19 in Kakinada, Serbia

Secondary



A sign on a closed local school due to COVID-19

The International Baccalaureate Organization (IBO) cancelled the examinations for its Diploma Programme and Career-related Programme candidates scheduled between 30 April 2020 and 22 May 2020, reportedly affecting more than 200,000 students worldwide. The IBO stated that it would award candidates their diplomas or certificates based on their coursework and the established assessment expertise, rigor and quality control already built into the programme.

Tertiary (higher) -

Tertiary education, also known as higher education, refers to the non-compulsory educational levels that follow completion of secondary school or high school. Tertiary education is normally taken to include undergraduate education, postgraduate as well as vocational education. Individuals who complete tertiary education generally receive degrees..

Impact on local economies -

In the United States of America, colleges and universities operate as "mini-cities" which generate significant revenue for cities, states, and regions. For

example, Princeton University estimated in 2017 that it contributed \$1.58 billion USD per year to the New Jersey economy, and that students spent about \$60 million in off-campus spending. College and university closures have a domino effect on economies with far-reaching implications.

In March, Linda Bilmes of the Harvard Kennedy School noted that “local hotels, restaurants, cafes, shops, car rental agencies and other local businesses obtain a significant share of annual revenue from graduation week and college reunions... these communities will suffer a lot of economic damage if the colleges remain closed at that time.”

Effects of covid-19 in India -

In India due to covid -19 all school, college and universities under lockdown so in rural area lot of problems generated for do study in JEE as well as NEET exam conducted in the month of May and June. Due to covid-19 India all universities /board exam is postponed and it may be canceled.

Recommended alternatives for covid-19 lockdown

Examine the readiness and choose the most

relevant tools: Decide on the use high-technology and low-technology solutions based on the reliability of local power supplies, internet connectivity, and digital skills of teachers and students. This could range through integrated digital learning platforms, video lessons, MOOCs, to broadcasting through radios and TVs. Zoom and Google classroom. Choose the appropriate learning methodologies based on the status of school closures and home-based quarantines. Avoid learning methodologies that require face-to-face communication.

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Preliminary Phytochemical Screening of Some Ocimum Species

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Abstract -

Ocimum is a common genus of family Lamiaceae; well known for its aromatic odor. From the ancient era the Ocimum species are giving a herbal and health benefit to the peoples, the present study is an attempt to find the secondary metabolites present in the four different species i.e. *Ocimum basilicum*, *Ocimum americanum*, *Ocimum gratissimum*, *Ocimum tenuiflorum*. The secondary metabolites composition used to differ from species to species. The preliminary phytochemical screening of selected Ocimum species shows the presence of Alkaloids, phenolics, cardiac glycosides, flavonoids, terpenoids, saponins, steroids, reducing sugar, carbohydrates and proteins. The *Ocimum gratissimum* has all the major secondary metabolites analyzed. The focus of the present study is to analyse the comparative preliminary phytochemical composition of selected Ocimum Species.

Keywords - Angiospermic, Lamiaceae, Ocimum, phytochemicals, Secondary metabolites.

Introduction -

For thousands of years, plants have provided to human beings many basic and important materials required for their day-to-day life. Plants are also considered as biochemical factories, as involved in the production of various chemical components for the utilization of mankind.

The phytochemistry has a special significance in medicinal science; it can be observed from many years' experiences of ethnobotanical studies. To estimate the phytochemicals and their respective medicinal property firstly there is a need of preliminary phytochemical test. Therefore, the present study was planned to analyse the major phytochemicals in leaves of some species of Ocimum.

Lamiaceae is one of the advance family of

flowering plants which consists of 236 genera and more than 6000 species among the world. These families have a great diversity and variety with a cosmopolitan distribution. The species of this family are easily recognizable by square stems & opposite leaves. The flowers are zygomorphic with five united petals and five united sepals, usually bisexual and verticillaster inflorescence. Most of the species belonging to the family are aromatic and possess essential oils. (Lawrence 1992).

Several plants from this are used in traditional ethnomedicines to treat various diseases (Jain, 1996 and Bijekar et al., 2014).

The aromatic essential oils are mostly present in leaves; however, they can be found in all aboveground parts of the plants. They are valuable in cosmetic, flavouring, fragrance, perfumery, pesticide and pharmaceutical industries (Ozkan 2008).

Ocimum sanctum is traditionally used to cure skin diseases, respiratory and gastrointestinal disorders, also in cough, cold and fever (Koche 2010.)

For the present investigations focused on preliminary phytochemical analysis of leaves of four *Ocimum* species these are namely, *Ocimum basilicum* L., *Ocimum americanum* L., *Ocimum gratissimum* L., *Ocimum tenuiflorum* L.

Materials and Method -

Collection of plant materials -

Plants and plant materials selected for the study were collected from different localities of Akola district specially from Chikhalgaoon, Kapsi, Akot region. Firstly, the plants were spotted in different localities, identified them using different floras (Naik, 1998; Singh and Karthikeyan, 2001 and Yadav and Sardesai, 2002). A specimen copies of selected plant is submitted to the Herbarium of Department of Botany, Shri Shivaji College, Akola (MS).

Preliminary phytochemistry -

Preliminary phytochemistry was done as given by Harborne (1973), and Krishnaiah et al, (2009). It showed that presence of alkaloids, cardiac glycosides, Terpenoids, Reducing sugar, Saponin, Tannins, flavonoids, phenolics and steroids in plants.

The Fresh leaves of the selected plants are used to perform the phytochemical analysis. The solvent system includes Distilled Water, ethyl alcohol, methanol, etc.

The preliminary phytochemical analysis of the selected plant material was done by using the Harborne, 1973, Krishnaiah et al., 2007 and Koche et al., 2010, method.

Observations and Results -

Table- 1: Preliminary phytochemistry of Leaves of four selected Ocimum Species.

Plant Species	Solvent Extract	Test for Phytoconstituents									
		Alkaloids	Glycosides	Phenolics	Flavonoids	Terpenes	Steroids	Saponins	Reducing Sugar	Carbohydrates	Proteins
1. <i>Ocimum basilicum</i>	AE	-	-	-	-	-	-	-	-	-	-
	EE	+	+	-	+	-	-	+	-	-	
	ME	+	+	+	+	+	-	+	-	-	
2. <i>Ocimum americanum</i>	AE	-	-	-	-	-	-	-	-	-	
	EE	+	+	+	+	-	-	+	-	-	
	ME	+	+	+	+	+	-	+	-	-	
3. <i>Ocimum gratissimum</i>	AE	-	-	-	-	-	-	-	-	-	
	EE	-	-	-	-	-	-	-	-	-	
	ME	+	+	+	+	+	-	+	-	-	
4. <i>Ocimum tenuiflorum</i>	AE	-	-	-	-	-	-	-	-	-	
	EE	-	-	-	-	-	-	-	-	-	
	ME	+	+	+	+	+	-	+	-	-	

AE- Aqueous Extract, EE-Ethanol Extract, ME-Methanol Extract

Discussion and Conclusion -

The present investigation was carried out on four plants to study the presence of medicinally active phytochemicals in the leaves of four ethnomedicinal plants from Akola District (MS) India. The results are summarized in table 1. Alkaloids, flavonoids, phenolics, terpenoids and saponins are present in all plants investigated, while steroids are present only in *Ocimum gratissimum* and *Ocimum tenuiflorum*.

Ocimum basilicum leaves extract shows the presence of Alkaloids, Cardiac glycosides, Phenolics, Flavonoids, Terpenes, reducing sugar and Proteins which dissolves in different taken Solvents.

Ocimum americanum leaves extract Shows the presence of all analysed major photochemical except Steroids.

In *Ocimum gratissimum* leaves extract found all analyzed major secondary metabolites i.e. alkaloids, flavonoids, tannins, phenols and saponins

etc.

Ocimum tenuiflorum leaves extract also shows presence of all major phytochemical constituents but lacks in nutritional metabolites like carbohydrates and proteins.

From above observations it is concluded that the comparative study of Selected *Ocimum* species showed differentiation in their phytochemical composition, the presence of these phytochemicals imparts in different medicinal properties. As other *Ocimum* species has a variable presence of phytoconstituents.

The above results also indicate that, the leaves of the plants investigated are rich in alkaloids, flavonoids, tannins, phenols and saponins and also showed presence of glycosides. They are known to show medicinal potential and physiological activities (Sofowara.1993). Our results are also in analogy with previous reports Thus the plants under investigation showed their medicinal potential and can be a source of useful drugs. However, further studies are required to isolate the active principal from the crude plant extract for proper drug development. The isolation of active principles and elemental detection of these plants are in process.

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Chemistry of Covid-19 Associated in Pandemic Context

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Abstract -

Research and development has play crucial role to fight against the global epidemic situation created by COVID-19. Most of the core chemistry based research organization and pharmaceutical companies are accompanying their efforts towards collecting more and more information about the Corona virus, evolving improved testing tools, and sooner or later creating a vaccine. In the current time we are in need of quick and more effective screening technique for the quick diagnosis of disease. In this review article we explain the origin, chemical aspect of virus, its prevention using the shield of Chemistry and upcoming future possibilities in research. Chemistry is an important aspect at every step at battle against Corona virus pandemic.

Keywords - Covid-19, Role of chemistry, Preventive measures

Introduction -

Since many people worldwide are now keenly aware, a COVID-19 outbreak was identified in the last month of 2019 in mainland China. Because of this date, this extremely infectious illness has impacted every continent in the world, with nearly one million patients reported in more than two hundred countries worldwide. A novel coronavirus was reported in China in late December 2019 which caused severe respiratory viral infection including pneumonia. This was first detected in Wuhan, China in December-2019 and has subsequently spread around the globe, contributing to an ongoing pandemic [1-2]. It had been originally named Novel Coronavirus and the World Health Organization (WHO) stated the virus-related syntax elsewhere [3]. The virus that caused the infection was named-severe acute respiratory coronavirus 2 syndrome (SARS-CoV-2). The disease induced by infection is called coronavirus or COVID-19 disease. COVID-19 was listed as an Infectious High-Consequence Infection Outbreak. Coronavirus

disease 2019 (COVID-19) is a contagious infection that is caused by coronavirus 2 (SARS-CoV-2), an extreme acute respiratory syndrome [4]. The earliest reported cases were linked to a large market for seafood and animals in Wuhan, suggesting an initial animal to person Disseminate. However, a growing numbers of subsequent patients did not introduce themselves to animal markets, signifying from one human to another spread. This is focused on what was historically known as MERS coronavirus incubation time. It is likely that early alienation, treatment and management is mutual contributing to substantial mortality [5-6]. In fact, health-care workers attenuation a consequence of concentrated research management may also lead to higher mortality rates. Coronavirus disease 2019 (COVID-19) has been declared a pandemic by the World Health Organization [7]. A comprehensive community effort is needed to stop the virus from spreading any further. A pandemic is defined as which occurs over a wide geographic area and affects an exceptionally high proportion of the population [8]. The last pandemic reported in the world was the 2009 H1N1 swine-flu pandemic. In this context, this article appraised the role of chemistry in the present circumstances on COVID-19.

COVID-19 -

Coronaviruses are a genus of viruses that cause diseases such as respiratory or gastrointestinal illness. Respiratory diseases can vary from common cold to more serious illnesses, such as Middle East Respiratory Syndrome (MERS-CoV) and Extreme Acute Respiratory Syndrome (SARS-CoV). A novel coronavirus (nCoV) is a modern strain previously unrecognized in humans. Once scientists identify exactly what coronavirus it is, they give it a name COVID-19 case, SARS-CoV-2 is the virus that causes it. Corona viruses received their name from the tiny

way they appear. The virus consists of a nucleus of genetic material enclosed by a protein-spiked shell which makes the crown appearance. In Latin the term Corona means "CROWN". The coronaviruses are zoonotic which means the viruses are transmitted between humans and animals [9-10]. Infection of COVID-19 disease occur the common and severe symptoms are given in the diagrammatically as shown in the figure-1;



Figure-1: COVID-19 disease common and severe symptoms [11]

Corona virus disease (COVID-19) is a recently identified coronavirus-caused infectious disease. Many patients with COVID-19 who get sick should have mild to moderate symptoms and heal without any care. How it spreads the virus that triggers COVID-19 is transmitted mainly through droplets that are produced when an infected individual coughs, sneezes or exhales. These droplets are too large to stay in the breeze, on floors or surfaces easily when the person are next to someone who has COVID-19 or touching a contaminated surface and then the eyes, nose or mouth, the individual may be affected by breathing in the virus [12].

Role of Chemistry for Prevention of COVID-19 -

1) **Chemical Means** - There are four ways to destroy corona virus [13] is diagrammatically discussed in the table-1 given below;

Methods	Reasons
<p>1) DISINFECTANT</p> <p>WASH HANDS FOR A MINIMUM OF 20 SECONDS</p>	<p>Soap molecules dissolve the lipid outside layer of the corona virus. Any kind of soap or surfactant is effective to break the outer layer of virus. Hand washing with soap for 20 seconds makes away the viruses and bacteria and also remove the dirt and grease.</p>
<p>2) ALCOHOL HAND SANITIZER</p> <p>WASH HANDS FOR A MINIMUM OF 20 SECONDS</p>	<p>Alcohol molecules dissolve the lipid outer layer of the corona virus and damage the porous structure of virus. About 60-70% alcohol content is used in hand sanitizers.</p>
<p>3) BLEACH SOLUTION</p> <p>WASH HANDS FOR A MINIMUM OF 20 SECONDS</p>	<p>Bleach oxidizes and destroys the virus proteins and genetic material. It should be left on the surface for at least 10 to 15 minutes.</p>
<p>4) HYDROGEN PEROXIDE</p> <p>WASH HANDS FOR A MINIMUM OF 20 SECONDS</p>	<p>Hydrogen peroxide oxidizes and destroys the virus proteins and genetic material. It should be left on the surface for at least 10 to 15 minutes.</p>

2) **Medicinal and Clinical Means** - Currently, it is satisfying to find out that there are at least four appropriate forms of chemicals

displayed good antiviral capacity that was allowed in clinics to combat the disease according to The Sixth COVID-19 Protocol version in China, 3CLpro targeting lopinavir and ritonavir; RdRp targeting ribavirin, Chloroquine Diphosphate targeting endosomal acidification, arbidol targeting production of 2'-5' oligoadenylates [14]. Lopinavir and ritonavir, in a family of drugs named protease inhibitors, also target non-structural SARS-CoV 3CLpro protein, approved by FDA in 2000 [15]. Ribavirin is an FDA authorized antiviral prescription drug that is often used in conjunction with other pharmaceutical substances management of recurrent hepatitis C virus and hemorrhagic virus fevers [16]. Ribavirin is a synthetic guanosine nucleoside against many RNA and DNA viruses that interferes with the synthesis of RdRp targeting viral mRNA introduced in medicine in the 1940s, chloroquine is a part of a significant group of chemically associated antimalarials, certain derivatives of quinoline. Chloroquine phosphate is orally treated as a source of chloroquine. Phosphate in chloroquine locates a family of medicines labeled antimalarial and amebicides that are used for malaria prevention and diagnosis. China, researchers from the Wuhan Institute of Virology measured chloroquine antiviral effectiveness against a clinical nCoV 2019 isolate in vitro was considered to be significantly successful in managing 2019-nCoV infection [17-18]. The structures of the above discussed compounds are given below;

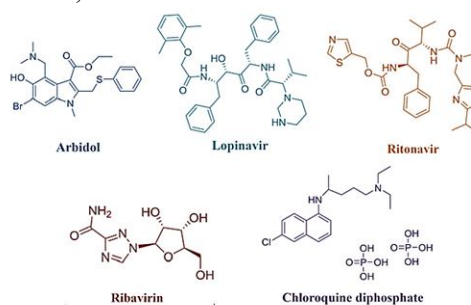


Figure-3: Satisfying chemical drugs are used to cure COVID-19

Summary -

In the above discussion, it can be concluded and suggested that the virus is primarily transmitted among people during close contact, most often through small droplets formed by coughing, sneezing, and talking. The droplets typically fall to the ground or to surfaces, rather than traveling long distances by air. Supported contagion control steps involve regular hand washing, preserving physical

distance from others particularly from those having symptoms, quarantine particularly for those have symptoms, covering cough and holding unwashed hands away from the nose. Recommendations for face covering use by the general public differ, with some agencies advising against them, others advocating against them, and others allowing their use. No evidence exists both for and against the use of face masks of healthy individuals in the bigger community. There are neither vaccines available nor specific antiviral treatments presently available for COVID-19, according to the World Health Organization.

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Thermo-Acoustical studies of binary liquid mixtures with addition of novel 3-phenyl-1- (3'-Nitrophenyl) prop-2-en-1-ones at various temperatures

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Abstract -

3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-ones have been synthesized and characterized by M.P., Infrared spectroscopy, Thin Layer Chromatography, and H1 NMR and GCMS data. The ultrasonic velocity, density and refractive indices of mixed solvents (0-100% by wt.) of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one have been measured at three different temperatures 298, 303, and 308K. The experimental data obtained was used to calculate various parameters such as Molar volume (Vm), Free volume (Vf), Acoustical impedance (Z), intermolecular free path length(Lf), adiabatic compressibility(b), Rao's molar sound velocity (Rm), Relative association (Ra) Molar refraction (Rm), Specific refraction (r) and Polarisability constant(a).

These parameters are interpreted in terms of solute- solute and solute- solvent interaction and its effect on mixed solvent systems

Keywords - Ultrasonic velocity, binary mixtures, molecular interaction.

Introduction -

Ultrasonic methods find extensive applications for characterizing aspects of physicochemical behavior such as the nature of molecular interactions in pure liquids as well as liquid mixtures [1-5]. Such studies as a function of concentrations are useful in gaining insight into the structure and bonding of associated molecular complexes and other molecular processes [5-10]

Ultrasonic velocity measurements have been successfully employed to detect and assess weak and strong molecular interactions which are present in binary and ternary liquid mixtures. In this paper, an attempt is made to investigate the ultrasonic studies of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in methanol and benzene binary liquid mixture systems at 298, 303 and 308 K are made.

An outbreak of pneumonia was reported from

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Wuhan, People's Republic of China, in December 2019 that was linked to a novel coronavirus designated as SARS-CoV-21. On January 31, 2020, the International Health Regulations Emergency Committee of the World Health Organization (WHO) declared the COVID-19 outbreaks as a Public Health Emergency of International Concern (PHEIC)2

Experimental -

All the chemicals used in present work were analytical reagent (AR) grade (99.9% pure) and were supplied by SD fine chemicals Ltd India. Ultrasonic velocities were measured with ultrasonic interferometer (model F 80) supplied by Mittal enterprises, New Delhi, operating at a frequency of 2 MHz. with an accuracy of $\pm 0.1\%$. Viscosities of pure solvents and their mixtures were determined using Ostwald's viscometer with an accuracy of $\pm 0.002\%$, calibrated with double distilled water. The densities of pure compounds and their solutions were measured accurately using 10 ml specific gravity bottles in ANAMED electric balance precisely and the accuracy in weighing is ± 0.1 mg.

Abbe's Refractometer having accuracy with was used for the measurement of refractive Index. The temperature of prism box was maintained constant by circulating water from thermostat at 298,303,308K

Synthesis -

A mixture of 3'-Nitroacetophenone (10 mmol) and benzaldehyde (10 mmol) was stirred for 24 hours in presence of NaOH as a catalyst. The product was isolated and recrystallised from ethanol. The purity of compound was checked by Thin Layer chromatography, Melting point. And the characterization of synthesized compound was done by IR, NMR and GCMS data.

Results and Discussions -

Various parameters such as adiabatic

compressibility ($\hat{\alpha}$) free path length (L_f) and acoustical impedance (Z) [11] were calculated from the measured data using the following standard expressions.

$$\beta = \frac{1}{U^2 \times \rho}$$

$$L_f = K_j \times \beta^{1/2}$$

Where K_j = Jacobson's constant = 6.0816 x 104

$$Z = U \times \rho$$

By using the density, viscosity, and sound velocity some thermodynamic parameters were determined by following relations

$$M_{eff}$$

$$M_{eff} = \sum XiMi$$

Where, Xi = Mole fraction and Mi = molecular weight of i th component.

The Molar compressibility or Wada's constant [12] can be calculated by

$$W = \frac{M}{\rho} \times \beta^{-\frac{2}{7}}$$

Where, M = relative molar mass and β = compressibility factor.

The Molar refraction of solvent and solution mixtures were determined from,

The Molar refraction [13-15] of binary liquid mixtures such as methanol-benzene mixture were determined

$$R_{M-B} = \frac{n^2 - 1}{n^2 - 2} \times \{(x_1m_1 + x_2m_2) \cdot d\}$$

Where,

R_m = Molar Refraction

X_1 = Mole fraction of solvent

n = R.I of Solution

X_2 = Mole fraction of solution

M_1, M_2 = Molecular Weights of solvent

D = Density of solution.

The Polarizability constant [16] ($\hat{\alpha}$) of solution is calculated by equation,

$$\hat{\alpha} = \frac{3 R_m}{4 \pi N_c}$$

Where, $\hat{\alpha}$ = Molar Polarizability

N_0 = Avogadro's number = 6.023 X 10²³

The molar volume [17] (V_m) can be calculated by the relation,

$$V_m = \frac{M_{eff}}{\rho}$$

Similar $(\frac{M_{eff} \times U}{K \eta})^{\frac{2}{7}}$ volume,

$$V_f = \frac{M_{eff} \times U}{K \eta}$$

Where, $K = 4.028 \times 10^9$ for all liquids which is a temperature independent constant.

The Rao's molar sound function [18] (R_m)

was calculated by equation,

$$R_m = \frac{M_{eff} \times U}{K \times \eta}$$

Viscous relaxation time[17] (δ):

$$\delta = \frac{4\delta/3\rho U^2}{\text{Gibb's Free Energy [19] (\Delta G^*)}}$$

The relaxation time for a given transition is related to the activation free energy. The variation of ΔG^* with temperature can be expressed in the form of Eyring salt process theory.

$\Delta G^* = \Delta H^* - T\Delta S^*$

The variation of ΔG^* with temperature can be expressed in the form of Eyring salt process theory.

$$\ln \left(\frac{U}{T} \right) = \ln \left(\frac{A}{T} \right) - \frac{\Delta H^*}{RT} + \frac{\Delta S^*}{R}$$

The above equation can be rearranged as,

$$\ln \left(\frac{U}{T} \right) = \ln \left(\frac{A}{T} \right) - \frac{\Delta H^*}{RT} + \frac{\Delta S^*}{R}$$

Where K is the Boltzmann constant and h is plank's constant.

The values were shown in table no.1

5. Tables:

Table No.1: Acoustical Parameters of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-ones in Benzene + Methanol mixture at 298K

% of Methanol (by weight)	Mole Fraction		Density (ρ) g cm ⁻³	Ultrasonic velocity (U) ms ⁻¹	Effective Molecular Weight (M_{eff})	Molar volume (V_m) m ³ mol ⁻¹	Rao's molar sound velocity (Rm) m/s
	X_1	X_2					
0	0.0000	1.0000	0.8698	1255.5	78.000	89.760	980.52
10	0.1977	0.8022	0.86	1236.2	68.900	80.110	862.94
20	0.3568	0.6432	0.8529	1219.2	61.587	72.210	774.64
30	0.4874	0.5128	0.8465	1193.6	55.578	65.657	701.13
40	0.5966	0.4034	0.8408	1191.5	50.555	60.125	638.59
50	0.6893	0.3107	0.8331	1190.7	46.293	55.566	588.04
60	0.7689	0.2310	0.8263	1163.2	42.628	51.587	545.75
70	0.8381	0.1619	0.8195	1145.1	39.447	48.133	506.23
80	0.8987	0.1013	0.8131	1135.6	36.660	45.085	472.93
90	0.9523	0.0477	0.8056	1124.7	34.194	42.445	443.11
100	1.0000	0.0000	0.7889	1092.0	32.000	40.562	420.17

Table No. 2: Acoustical Parameters of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in Benzene + Methanol mixture at 298K.

Wt. % of methanol	Adiabatic compressibility (β) $\times 10^{-7}$ Kg ⁻¹ ms ⁻²	Free path length (L _f) $\times 10^{-4}$ m	Acoustical impedance (Z) Kg.m ⁻² s ⁻¹	Refractive Index (n)	Wada's constant (W)	Relative association (Ra)	Molar sound velocity (Rm)
0	6.772	3.1984	1132.8	1.4915	105705	1.0081	972.640
10	6.478	3.4750	1152.2	1.4645	92438.8	1.0025	863.940
20	7.691	3.7259	1052.1	1.4510	81791.9	0.9998	774.312
30	7.966	4.1343	1030.8	1.4360	72624.5	0.9971	700.687
40	8.285	4.2221	1007.4	1.4240	66179.3	0.9905	641.510
50	8.492	4.3178	990.48	1.4085	60825.8	0.9818	592.732
60	8.633	4.7976	978.37	1.3960	54919.4	0.9827	545.265
70	9.016	5.2041	953.42	1.3820	50284.5	0.9784	506.870
80	9.231	5.4628	945.95	1.3695	46500.1	0.9738	473.124
90	9.389	5.7758	916.59	1.3550	43153.2	0.9654	443.803
100	10.26	6.7690	876.92	1.3270	39626.6	0.9580	419.905

Table No.3: Density, Refractive Index, Molar Refraction, and Polarizability Constant of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in Benzene + Methanol mixture

% of Methanol (by weight)	Density gm/cm ³	Refractive index (n)	Molar Refraction (R _m)	Refraction	Polarizability constant (α) x 10 ⁻²³
0	0.8665	1.4750	25.340		1.0050
10	0.8573	1.4625	22.115		0.8770
20	0.8511	1.4500	19.446		0.7712
30	0.8428	1.4350	17.207		0.6824
40	0.8368	1.4220	15.351		0.6087
50	0.8291	1.4060	13.715		0.5438
60	0.8236	1.3940	12.381		0.4910
70	0.8157	1.3800	11.203		0.4443
80	0.8096	1.3670	10.165		0.4031
90	0.8027	1.3550	9.2840		0.3682
100	0.7862	1.3260	8.2121		0.3256

Table No.4: Acoustical Parameters of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in Benzene + Methanol mixture at 303K.

% of Methanol (by weight)	Mole fraction		Density (ρ) g cm ⁻³	Ultrasonic velocity (U) ms ⁻¹	Effective Molar Weight (M _{eff})	Molar volume (V _m) m ³ mol ⁻¹	Rao's molar sound velocity (R _m) m/s
	X ₁	X ₂					
0	0.0000	1.0000	0.8585	1255.5	78.000	89.760	980.15
10	0.1977	0.8022	0.8529	1215.2	68.900	80.110	862.06
20	0.3568	0.6432	0.8476	1206.8	61.587	72.210	773.59
30	0.4874	0.5128	0.8408	1192.8	55.578	65.657	701.05
40	0.5966	0.4034	0.8345	1182.0	50.555	60.125	640.47
50	0.6893	0.3107	0.8285	1163.6	46.293	55.566	587.69
60	0.7689	0.2310	0.8208	1155.6	42.628	51.587	544.99
70	0.8381	0.1619	0.8137	1142.8	39.447	48.133	506.88
80	0.8987	0.1013	0.8063	1141.2	36.660	45.085	475.00
90	0.9523	0.0477	0.7968	1129.2	34.194	42.445	446.88
100	1.0000	0.0000	0.7843	1108.8	32.000	40.562	422.30

Table No.5: Acoustical Parameters of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in Benzene + Methanol mixture at 303K

Wt. % of methanol	Adiabatic compressibility (β) × 10 ⁻⁷ Kg ⁻¹ ms ⁻²	Free path length (Lf) × 10 ⁻⁹ m	Acoustical impedance (Z) Kg.m ⁻² s ⁻¹	Refractive Index (n)	Wada's constant (W) × 10 ⁻³	Relative association	Molar sound velocity (R _m)
0	7.3896	5.1732	1077.84	1.4810	105692.4	1.00037	972.640
10	7.9397	5.3620	1036.44	1.4645	90660.69	1.00472	863.940
20	8.1010	5.4165	1022.88	1.4490	80728.85	1.00078	774.312
30	8.3593	5.5022	1002.90	1.4350	72300.43	0.99660	700.687
40	8.5770	5.5734	986.38	1.4220	65407.43	0.99216	641.510
50	8.9150	5.682	964.04	1.4050	59176.97	0.99019	592.732
60	9.1230	5.7480	948.51	1.3940	54373.68	0.98320	545.265
70	9.4101	5.8378	929.89	1.3790	49978.77	0.97837	506.870
80	9.5260	5.8736	920.15	1.3665	46571.69	0.96990	473.124
90	9.8420	5.9702	899.76	1.3540	43256.70	0.96190	443.803
100	10.371	6.1286	869.63	1.3240	40064.28	0.95256	419.905

Table No. 6: Density, Refractive Index, Molar Refraction, and Polarizability Constant of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in Benzene + Methanol mixture.

% of Methanol (by weight)	Density gm/cm ³	Refractive index (n)	Molar Refraction (R _m)	Polarizability constant (α) x 10 ⁻²³
0	0.8585	1.4800	25.856	1.0254
10	0.8529	1.4650	22.312	0.8848
20	0.8476	1.4500	19.489	0.7729
30	0.8408	1.4350	17.249	0.6840
40	0.8345	1.4215	15.393	0.6104
50	0.8285	1.4060	13.695	0.5431
60	0.8208	1.3930	12.423	0.4926
70	0.8137	1.3780	11.204	0.4443
80	0.8063	1.3650	10.194	0.4043
90	0.7968	1.3530	9.3289	0.3699
100	0.7843	1.3240	8.0860	0.3246

Table No.7: Acoustical parameters of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in Benzene + Methanol mixture at Temperature 308K

% of Methanol (by weight)	Mole Fraction		Density (ρ) g cm ⁻³	Ultrasonic velocity (U) ms ⁻¹	Effective Molar Weight (M _{eff})	Molar volume (V _m) m ³ mol ⁻¹	Rao's molar sound velocity (R _m) m/s
	X ₁	X ₂					
0	0.0000	1.0000	0.8569	1217.8	78.000	89.760	972.05
10	0.1977	0.8022	0.8512	1202.0	68.900	80.110	860.64
20	0.3568	0.6432	0.8450	1185.2	61.587	72.210	771.31
30	0.4874	0.5128	0.8379	1172.0	55.578	65.657	699.36
40	0.5966	0.4034	0.8311	1160.8	50.555	60.125	639.22
50	0.6893	0.3107	0.8236	1145.2	46.293	55.566	588.05
60	0.7689	0.2310	0.8175	1136.0	42.628	51.587	544.08
70	0.8381	0.1619	0.8096	1122.2	39.447	48.133	506.37
80	0.8987	0.1013	0.8032	1109.2	36.660	45.085	472.34
90	0.9523	0.0477	0.7961	1099.6	34.194	42.445	443.33
100	1.0000	0.0000	0.7812	1074.8	32.000	40.562	419.58

Table No. 8: Acoustical Parameters of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in Benzene + Methanol mixture. at temperature 308K.

Wt. % of methanol	Adiabatic compressibility (β) × 10 ⁻⁷ Kg ⁻¹ ms ⁻²	Free path length (Lf) × 10 ⁻⁹ m	Acoustical impedance (Z) Kg.m ⁻² s ⁻¹	Refractive Index (n)	Wada's constant (W) × 10 ⁻³	Relative association	Molar sound velocity (R _m)
0	7.8690	5.3384	1043.53	1.4800	102613.5	1.0087	972.05
10	8.1313	5.4266	1023.14	1.4650	89765.12	1.0064	860.64
20	8.4250	5.5237	1001.49	1.4500	79404.91	1.0037	771.31
30	8.6880	5.6093	982.02	1.4350	71164.99	0.9990	699.36
40	8.9290	5.6866	964.74	1.4215	64367.47	0.9941	639.22
50	9.2580	5.7904	943.18	1.4060	58415.89	0.9896	588.05
60	9.4788	5.8590	928.68	1.3930	53558.76	0.9848	544.08
70	9.8082	5.9600	908.53	1.3780	49201.89	0.9793	506.37
80	10.1194	6.0530	890.90	1.3650	45359.98	0.9754	472.34
90	10.3887	6.1340	875.39	1.3530	42140.70	0.9696	443.33
100	11.0810	6.3349	839.65	1.3240	38912.32	0.9587	419.58

Table No. 9: Density, Refractive Index, Molar Refraction, and Polarizability Constant of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one in Benzene + Methanol mixture.

% of Methanol (by weight)	Density gm/cm ³	Refractive index (n)	Molar Refraction (R _m)	Polarizability constant (α) x 10 ⁻²³
0	0.8569	1.4800	25.850	1.0250
10	0.8512	1.4650	22.377	0.8874
20	0.8450	1.4500	19.586	0.7767
30	0.8379	1.4350	17.309	0.6864
40	0.8311	1.4215	15.440	0.6123
50	0.8236	1.4060	13.806	0.5475
60	0.8175	1.3930	12.445	0.4935
70	0.8096	1.3780	11.234	0.4455
80	0.8032	1.3650	10.196	0.4043
90	0.7961	1.3530	09.313	0.3693
100	0.78122	1.3240	08.218	0.3259

Conclusion -

Many thermodynamic properties can be elucidated from ultrasound velocity, viscosity and density data. Thermodynamic data are very important tool for understanding molecular interaction; solute – solvent and solute – solute, occurring in the solution.

In the present paper, we have used this technique for the better understanding of molecular interaction in some solutions. The result is interpreted in terms of molecular interaction occurring in the solution.

The decrease in r , h and U with C suggest that the increase of cohesive forces is due to powerful molecular interactions [20-22], while the decrease of these parameters with T indicates that the cohesive forces are decreased.

With a view to understand the effect of concentration, temperature, nature of solvents and structure of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one structure of forming or structure – breaking tendency various acoustical parameters like acoustical impedance (Z), adiabatic compressibility (b), Intermolecular free path length (L_f), Internal pressure (δ_i), Free volume (V_m) were determined by using the experimental data of r , h and U of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one solution in methanol and benzene at three different temperatures.

The Intermolecular free path length (L_f) is observed to increase with T suggesting the presence of solvent – solute interactions.

The increase of adiabatic compressibility (b) might be due to dissociation of solvent molecules around solute molecules supporting strong solvent-solute interactions [23-25]. The adiabatic

compressibility (b) of the solution of 3-phenyl-1-(4'-methoxyphenyl) prop-2-en-1-one was also found to decrease with C and increase with T in system. These phenomena can be attributed to the solvated molecules that were fully compressed by electrical force of the ions. The compressibility of the solution was mainly due to free solvent molecules. The presence of compressibility of the solution increases with the decrease in solute concentration due to solute-solvent interactions in the system. This was further confirmed by the increase in viscosity of 3-phenyl-1-(3'-Nitrophenyl) prop-2-en-1-one solutions in methanol and benzene systems.

Increase of L_f with the C further supported solvent-solute interactions. Due to solvent-solute interactions, structural arrangement is considerably changed.

The internal pressure (δ) is the resultant of forces of attraction and repulsion between the molecules in the solution. The result of adiabatic compressibility and intermolecular free path length, which were found decreased with C and increased with T , while velocity and viscosity were found increased with C and decreased with T in methanol and benzene system, suggest that solute-solvent interaction is more predominant [25-27].

This was confirmed from the results of internal pressure which was found to be increased. The internal pressure (δ) of solution is single factor, which plays an important role in transport properties of solutions. The increase of internal pressure (δ) and decrease of free volume (V_f) indicate that increase of cohesive forces and vice versa in the solutions.

The free volume (V_f) of a solute molecule at a particular temperature and pressure depend on the internal pressure of liquid in which it is dissolved. The decrease in free volume causes internal pressure decrease or vice versa however internal pressure increased and free volume decreased in both solvent systems. This again confirmed the existence of solute-solute and solute-solvent interactions in the system studied so far.

The predominant symptom followed by fever, 48 (57%), sore throat, 42 (50%) and nasal discharge 29 (34.5%). Only seven (8.3%) positive cases had a comorbid condition. Twelve (14.3%) positive cases received antivirals and 31 (36.9%)

received antibiotics. Only one case needed mechanical ventilation. During the study period, January 22 to February 29, 2020, respiratory virus detection rate was 23 per cent and with circulation of one or more respiratory viruses. Only four imported cases were confirmed for SARS-CoV-2. Thus, this study highlights the importance of screening for other respiratory viruses in case of patients presenting with respiratory symptoms. So as my compound works in same field as an antimicrobial, antiviral and antifungal field the present work is going on whether this types of compounds will show better activities against COVID-19, coronavirus Pandemic diseases.

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Synthesis and Physical Parameter Study of Chloro Methyl Chalcone

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Abstract -

The density, viscosity and ultrasonic velocity have been measured for synthesized chloro methyl chalcone in DMF and THF solutions of various concentrations at 300.15K with a view to understand the molecular interactions in these solutions. The experimental data have been used to calculate various acoustical parameters, which are interpreted in terms of solute-solute and solute-solvent interactions in different solvents.

Keywords - Chloro methyl chalcone, density, viscosity, ultrasonic velocity, DMF, THF, acoustical parameters.

Introduction -

Chalcones are known as benzalacetophenones or benzylideneacetophenone. Kostanecki and Tambor(1) gave the name Chalcone. The chemistry of chalcones has generated intensive scientific studies throughout the world, due to their biological and industrial applications. Chalcones are characterized by their possession of a structure in which two aromatic rings are linked by an aliphatic three carbon chain. Different methods are available in the literature for the synthesis of chalcones(2-7). The most convenient method is the one, which involves the Claisen-Schmidt condensation of equimolar quantities of aryl methyl ketones with arylaldehyde in presence of alcoholic alkali. The chalcones have been found to be useful for the synthesis of variety of heterocyclic compounds and are associated with different biological activities.

Now a days, lots of interest has been generated on the use of ultrasound radiation in synthetic organic chemistry, which includes decrease of reaction time, increase of yield, lower reaction temperature etc(8-11). By ultrasonic sound velocity measurements, the molecular interactions in pure liquid (12-14), aqueous solutions (15-16) and

liquid mixtures (17) have also been studied.

Several physico-chemical parameters are available in the list and few of them are of much interest. It was well understood by the literature that physico-chemical properties such as acoustical properties, density, viscosity, ultrasonic sound velocity, refractive index, etc. have contributed advancement in the physical sciences and also in daily human life. These properties are the sensitive indicators for understanding molecular interactions.

The study of physico-chemical properties of compounds in solutions gives complete understanding of the behavior of compounds in different solvents. Literature survey shows that very little work has been reported for the study of physico- chemical studies such as acoustical properties, density, viscosity, ultrasonic sound velocity, refractive index of the organic as well as heterocyclic compounds.

Thus, in the present work, chloro methyl chalcone was synthesized and characterized by IR and NMR spectra. Various physico-chemical properties and acoustical properties such as density, viscosity and ultrasonic sound velocity have been studied in dimethylformamide (DMF) and tetrahydrofuran (THF) for different concentrations of chloro methyl chalcone solution were done at 308.15 K with a view to understand the molecular interactions in these solutions. From these experimental data, various acoustical parameters such as isentropic compressibility, Rao's molar sound function, specific acoustical impedance, internal pressure, Vander Waals constant, free volume etc. were evaluated and results are discussed.

Materials and Methods -

Experimental -

The title compounds were synthesized by Claisen-Schmidt condensation using ethanol as reaction medium. Melting points (oC) were

determined with a MELTEMP II capillary apparatus (LAB Devices, Holliston, MA, USA) without correction. IR spectra were recorded on FT-IR spectrometer (Perkin Elmer) using KBr disc method. ¹H NMR spectra were recorded on Bruker 400 MHz spectrometer in CDCl₃ as a solvent. TLC was performed on silica gel coated plates for monitoring the reactions.

The general procedure for the synthesis of Chloro methyl chalcone(FMC)

A mixture of 4-methyl benzaldehyde (1 mM) and 4-chloroacetophenone (1 mM) was dissolved in 15 mL ethanol. To this mixture, sodium hydroxide (20%, 1mL) was added and the reaction mixture was stirred at room temperature for 12 h. After completion of the reaction (monitored by TLC), the crude mixture was worked up in ice-cold water (100 mL). The product which separated out was filtered and recrystallized from ethanol to afford title compound.

Scheme 1: Synthesis of Chloro methyl chalcone (CMC)

1-(4-Chloro-phenyl)-3-p-tolyl-propenone

Molecular formula: C₁₆H₁₃ClO, yield 90%; M.P. 172°C; IR (cm⁻¹): 1661 (C=O group stretching), 1600 cm⁻¹ (C=C bond) and 1588 (C=C stretching in aromatic ring); ¹H NMR (CDCl₃): δ 2.42 (s, 3H, H-Methyl), 7.845-7.806 (d, 1H, 15.6 Hz, -CH=CH-), 7.511-7.472 (d, 1H, 15.6 Hz, -CH=CH-), 7.249-8.005 (m, 8H, ArH).

Choice of Solvents -

N,N-Dimethylformamide (DMF) and Tetrahydrofuran (THF) have been chosen as solvents in the present work. The densities, viscosities and ultrasonic velocities of solvents and solutions of different concentration were measured at 300.15K by using pycnometer, an Ubbelohde suspended level viscometer and ultrasonic interferometer¹⁸.

Results and Discussions -

From the experimental data of density(ρ), viscosity(η) and ultrasonic sound velocity(U) of pure solvents (DMF and THF) and the solutions of synthesized compound, various acoustical parameters like specific acoustical impedance (Z), isentropic compressibility (β_s), intermolecular free length (Lf), molar compressibility (W), Rao's molar sound function (Rm), relaxation strength (r), relative association (RA), internal pressure (δ), free

Volume(Vf) etc. were calculated at 308.15 K using the standard equations¹⁸.

In the present work, density, viscosity and ultrasonic sound velocity have been studied in DMF and THF for different concentrations of FMC at 300.15 K. It is observed that ultrasonic velocity (U) increases with increase in concentration of the compound. Table - 2 and 4 showed that Lf decreases continuously, which suggest that there is strong interaction between solvent and compound molecule.

This is also supported by the variations of isentropic compressibility (β_s) with concentrations of the compound for both solvents. From the obtained data, it was observed that both isentropic compressibility (β_s) and relaxation strength (r) are decreases with concentrations. The decrease of β_s with increasing concentration might be due to aggregation of solvent molecules around solute molecules indicating thereby the presence of solute-solvent interactions.

The increase of acoustical impedance (Z) further confirms the solute-solvent interactions in these systems. The properties like Rao's molar sound function (Rm), molar compressibility (W) and are observed to increase linearly with concentrations. The linear variation of these acoustical properties indicates absence of complex formation.

The internal pressure (δ) is the results of forces of attraction and repulsion between the molecules in solutions. The data reported in Table - 2 and 4 showed that internal pressure decreases with concentration, which indicates the decrease in cohesive forces. Although decrease in compressibility (β_s), intermolecular free length (Lf), relaxation strength (r) and increase of velocity (U), viscosity (η) suggest predominance of solute-solvent interactions, the decrease in internal pressure indicates the existence of solute-solute interactions.

The free volume (Vf) of solute molecule at particular temperature and pressure depends on the internal pressure of liquid, in which it was dissolved. The decrease in molecular association causes an increase in free volume (Vf). Thus, free volume is an inverse function of internal pressure.

Conclusion -

In summary, the title compound was

synthesized conveniently and tested for various physical parameters. The result reveals that V_f increases with concentration. Hence, increase in free volume causes internal pressure to decrease, which indicates the solute-solute interactions. This suggests that both solute-solute and solute-solvent interactions exist in these systems.

Table 1: Experimental data of density (ρ), ultrasonic velocity (U) and viscosity (η) with various concentration of CMC in DMF at 300.15K.

Conc. (M)	Density (ρ) g.cm ⁻³	Velocity (U) 10 ⁻³ cm.s ⁻¹	Viscosity (η)10 ³ poise
DMF	0.9376	1401.3	0.6594
0.002	0.9352	1439.2	0.6942
0.004	0.9355	1442.2	0.7192
0.006	0.9358	1444.8	0.7362
0.008	0.9362	1446.0	0.7645
0.010	0.9364	1447.8	0.7691

Table-2: Variation of acoustical parameters with concentration of CMC in DMF at 300.15.

Conc. (M)	K_s 10 ⁻⁴	Lf (Å)	r 10 ⁻⁸	Z.10 ⁻⁹ g.cm ⁻²	Rm.10 ² cm ^{4.3} .s ^{-1.3}	W.10 ³ cm ³ .dyn ⁻¹	π	V_f (cm ³)10 ⁻⁷	RA
DMF	5.1417	0.04753	7.1315	1.3480	8.8016	2.3045	45823	1.2156	1.0000
0.002	5.1348	0.04751	7.1676	1.3468	8.8516	2.3119	4575.4	1.2212	0.9999
0.004	5.1376	0.04750	7.1541	1.3472	8.8853	2.3138	4563.3	1.2328	1.0001
0.006	5.1511	0.04743	7.1247	1.3461	8.6773	2.3159	4556.1	1.2334	0.9998
0.008	4.8400	0.04683	7.0910	1.4356	8.6783	2.3178	4549.4	1.2378	0.9991
0.010	4.6731	0.04668	7.3699	1.3454	7.7771	2.3190	4541.3	1.2421	0.9989

Table-3: Experimental data of density (ρ), ultrasonic velocity (U) and viscosity (η) with various concentration of CMC in THF at 308.15K.

Conc.(M)	(ρ) g.cm ⁻³	(U) 10 ⁻⁵ cm.s ⁻¹	(η)10 ³ poise
THF	0.8684	1245.6	0.4179
0.002	0.8662	1256.0	0.4043
0.004	0.8673	1258.0	0.4080
0.006	0.8684	1259.8	0.4148
0.008	0.8695	1261.6	0.4247
0.010	0.8704	1262.1	0.4378

Table-4: Variation of acoustical parameters with concentration of CMC in THF at 300.15K.

Conc. (M)	K_s 10 ⁻⁴	Lf (Å)	r 10 ⁻⁸	Z.10 ⁻⁹ g.cm ⁻²	Rm.10 ² cm ^{4.3} .s ^{-1.3}	W.10 ³ cm ³ .dyn ⁻¹	π	V_f (cm ³)10 ⁻⁷	RA
THF	7.2697	0.05648	5.2134	1.0952	8.9133	2.3267	4621.5	0.9613	1.0000
0.002	7.2754	0.05646	5.2173	1.0928	8.9307	2.3336	4622.3	0.9753	0.9975
0.004	7.2646	0.05650	5.1996	1.0926	8.9644	2.3373	4617.8	0.9796	0.9969
0.006	7.2768	0.05647	5.1819	1.0924	8.9469	2.3430	4611.6	0.9838	0.9970
0.008	7.2732	0.05643	5.1622	1.0920	8.9504	2.3453	4606.2	0.9878	0.9975
0.010	7.2710	0.05634	5.0548	1.0841	8.9818	2.3478	4602.2	0.9903	0.9984

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Effect of Outbreak of Coronavirus on Education

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Abstract -

COVID-19 pandemic has started a new era full of challenges, crisis, issues, uncertainties as well as opportunities. It has affected each and every field of human world and natural world on this planet. Education sector is not an exception to this. The pandemic has brought transformations in the present scenario as far as teaching learning is concerned. Online teaching and learning is preferred in the present context. Virtual learning has become a part of education sector. There is a need to go for Digital literacy. There is also a need of training to teachers regarding use of technology in imparting education. The policy makers have to consider all these things to make education system very resilient.

Keywords - COVID-19 pandemic, virtual learning, Resilient etc.

COVID-19 the pandemic has changed everything across the globe. The virus is unknown and invisible. The situation is changing so rapidly. There is primarily a health issue. The pandemic affects each and every field in the world. Its consequences will be felt for many years to come in the whole world. COVID-19 has started a new era full of challenges, crisis, issues and uncertainties as well as opportunities. Along with various fields it is a crucial time for education field, examination, school admissions, competitive examinations and entrance tests of various professional courses. As the novel Corona virus spreads across the world and in India it affects education sector. By mid-March 2020 nearly 75 countries have announced education Institutions closures. With the outbreak of COVID-19 the closure of schools, colleges and Universities will have large term impact on learning. The academic calendar gets disturbed. The outbreak will make the country to face social and economic consequences.

The very format and structure of schooling, learning, teaching and assessment process is getting affected by the closures of the educational institutions. The present situation is that all educational institutions cannot adopt online teaching methods as these institutions do not have access to e-learning solutions. The pandemic has started to affect education system in the whole world. In traditional learning model going to school is preferred because education leads to the social process. It enables the children to learn various skills like social skills, life skills, study skills, decisionmaking, creative problem solving etc. It also enables them to groom their personality. It helps them to learn human and moral values. Children can learn importance of love, care, compassion, sharing and solidarity.

The pandemic is disrupting higher education which is very important factor of a country's future. In higher education the picture is not very clear. The spread of COVID-19 has forced many educational institutions across the world to close campuses. There are a number of uncertainties. Universities and colleges are replacing the traditional examination system with online assessment tools. Learners are expected to study from their home and follow social distancing. Careers of graduates and postgraduates are affected by the pandemic. They are facing problems as well as their studies and assignments are concerned. They will be graduated and post graduated in this era of challenges and global recession. These people will face the problems due to poor market conditions and may have to work by accepting lower paid jobs. This can affect their psychology but they have to embark on new professions such as Data Manager, Data Designer, and Information Architect.

COVID-19 has proved to be a catalyst for educational institutions globally to search for

innovative solutions for the problems. Teachers and students have to think and accept a new world of virtual teaching learning. The long lockdown due to the COVID-19 brings teachers and students from the traditional classroom to the digital platform. The teachers are using various online apps for lectures and assignments. Students watch videos on various topics. This enables them to learn various topics so easily and smoothly. E-learning itself is a challenge to teachers and students as far as technology and access is concerned.

There is a need to take efforts to transform and improve higher education in India. Most of the educational institutions have taken initiatives. They upload the study material to YouTube. Some institutions have designed their own portal. Some institutions have started to use various apps for online classes. There is an extensive use of online learning because of COVID-19. It leads students for self-learning. The institutions keep learners academically engaged online.

The pandemic has brought transformations in the present scenario as far as teaching learning is concerned. The centuries-old chalk talk teaching method is replaced by technology. We have to embrace technology. All stakeholders and government, educationists, technology providers and trainers have to utilize the digital platforms as solutions to the crisis. The educational policy makers, leaders of higher educational institutions and stakeholders will have to think about integrating ICT for teaching learning. They have to strengthen Indian education system to face different crisis such as pandemic, Climate change and technological change. Technology can bring transformation in education system and make teaching learning very interesting and effective. The policymakers have to frame the policy to improve quality of Higher Education. They can suggest some initiatives to be taken to mitigate the negative effects of the pandemic. To assess quality of online learning platforms we have to go for blended learning. We have to teach our students how to learn. Teachers have to find creative way to deliver content to students. Teachers, students and parents have to be connected with each other. Teachers need to spend extra time for the preparation and execution of teaching. Teachers have to manage various types of learning platforms and applications. They

have to take the content from various resources for teaching.

Digital Learning Management System, Use of mobile phones, Massive Open Online Course platforms, self-directed learning content, mobile applications, collaborative platforms, use of tools to create digital learning content will be considered while framing the policies for online learning in challenging time. There are tools and apps but which one is worth and how to use it require training.

There is a need to discuss and plan the infrastructure and availability of technology. Educational institutions and stakeholders have to create digital literacy. The needs and requirements of the digital world will have to be taken into account while framing the policies. The global lockdown of educational institutions has created fear, insecurity, uncertainty, confusion in the minds of students and parents. To overcome the problems Teacher should get professional development training. There is a need to nurture relationship between teachers and learners and their families. There is also a need of establishing rapport with them. Inclusive and equitable education system is needed. Teachers have to make use of various resources to create their own digital content. MOOCs can be used for producing and disseminating knowledge.

Teachers have to develop learner centred activities and make use of ICT. They need to feel comfortable. They have to build socio-economic competencies. This will provide psychological support to them. Teachers will have to support students virtually, psychologically and professionally. At present most of the teachers are not trained technologically. They are not equipped with laptops. They are less familiar with technology. Teachers have to be digitally literate. For most of the parents it's difficult to adjust to the online system of learning. Some subjects are very practical such as interior decoration, fashion designing, tourism, hospitality etc. It is not convenient and enough to teach online.

The fact is that online learning has its own constraints. We have to work and reshape the old things in a new way and make maximum use of it. It is high, tough and critical time for all of us. We can make the best use of online learning. We have to prove that online classes are collaborative and

interactive. Various activities, worksheets and interactive sessions make the class very interesting. This will help to create academic ambience for learners in the digital competition. It

is very important to have human centred approach in the novel Coronavirus pandemic.

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A Study of Health and Yoga Awareness among People in COVID19 Pandemic Situations

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Abstract -

In the wake of COVID19 outbreak, entire mankind across the globe is suffering. Enhancing the natural defense system; Immunity of the body plays an important role in maintaining optimum health. We all know that prevention is better than cure. While there is no medicine for COVID 19 as of now, it will be better to take preventive measures which boost our immunity in these times. For this noble purpose, Ayurveda and Yoga plays very important role. In the present research study the researcher has been made an online survey with the help of self-created test in the form of Google form. The researcher found that, the people are so much aware about their health and possess much better knowledge of yoga during this pandemic COVID19 situation.

Key words - Health, Yoga, Awareness, COVID19.

Introduction -

The year 2020 is very hazardous to the world. The pandemic COVID19 situation is so horrible to all over the world. Well developed, advanced and well established nations like USA, Japan, China and so on are also suffering from the disease Novel Corona. If we see the symptoms of the disease Corona, they are just like common cold and flu, but the effect of it is very dangerous just a death. Coronavirus outbreak was first reported in Wuhan, China on 31 December, 2019.

Before going in detail about the impact of it, first, let us study about coronavirus. Coronavirus (CoV) is a large family of viruses that causes illness. It ranges from the common cold to more severe diseases like Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). The novel corona virus is a new strain of virus that has not been identified in human so far. WHO is working closely with global experts, governments, and other health organizations

to provide advice to the countries about precautionary and preventive measures. The learned and wise people have taken all types of precautions, till the fear and pressure occurs in the mind that, the virus will come and affect from this side, this thing, this way or that. So the mentality of the people become negative and they are in the fearful, stressful situation. The tsunami of novel corona virus has impacted all business sectors, economic, social, political, psychological wellbeing of the human. The list is long and comprehensive and no sector has been spared.

The virus affects the respiratory system and lungs of the human beings, which are the lifelines of living beings. The core promoter of Yoga, the great Maharshi Patanjali has been told that, "Chale Wate Chale Chittam, Nischale Nischalam Bhavet." If we breathe, we respire, we inhale the oxygen from the atmosphere then and then we will remain alive. So, AYUSH Ministry has been suggested daily practice of yogasana, pranayam and meditation for at least 30 minutes.

In the wake of COVID 19 outbreak, entire mankind across the globe is suffering. Enhancing the natural defense system; Immunity of the body plays an important role in maintaining optimum health. We all know that prevention is better than cure. While there is no medicine for COVID 19 as of now, it will be better to take preventive measures which boost our immunity in these times. Ministry of AYUSH recommends certain self-care guidelines to improve the respiratory health. These are supported by Ayurveda literature and scientific publications.

First priority of us is to defeat COVID 19. So, is there any light at the end of the tunnel, and where do we go from here? We may be stating the obvious but it is worthwhile reiterating that the greatest challenge before us is tackling the effects of the COVID-19 pandemic. The top priority is finding a

way to defeat or neutralize the effects of the virus. All other battles can be handled once we cross this particular challenge. Thanks to the timely action initiated by our government, India has outperformed most other countries in slowing down the pandemic.

Hon'ble Prime Minister Modi announced the first 21 days of India's lockdown on 24th March. During his address to the nation he had said, "JaanHaiTohJahaanHai(only if there is life there will be livelihood)". On 11th April, in a meeting with the Chief Ministers of India, he said "Our mantra earlier was jaanhaitohjahaanhaibut now it is jaanbhijahaanbhi(both, lives and livelihood matter equally)." On 11th May, the Indian Prime Minister said that, "Indians should become self-dependent - Aatmanirbhar." That self-dependent is not only in the materialistic point of view but it is also the physical, mental, emotional and spiritual wellbeing. The physical strengthens should be achieved by means of our traditional Ayurveda and yogic practices. Mental self-dependence should be maintained by acquiring and applying the Brain-gain instead of Brain-drain in the society. Emotional and Spiritual self-dependence improves the interpersonal and intra-personal relationships among the people. At the result, an Indian Economy will flourish and be stable by means of all these kinds of self-dependent nature of Indians.

Background of the research: The AYUSH Ministry as well as the Yogic experts, Ayurvedacharya suggested the yogic practices to face and overcome the disease and solve the health issues during this pandemic COVID19 situation. Now the question arises that, up to what extent the people are aware about yoga and yogic practices as well as the health issues during this current situation? To find out the answer of this question the researcher has been done a little bit of work on this topic.

Objective of the research -

To know the views of the people regarding yoga and health awareness in current COVID 19 situation.

Research method -

The researcher has applied the online survey method for the present research.

Population and Sample -

Population of the present study was all the people who were in contact of the researcher through WhatsApp. Total 120 respondents were the sample of the study who had given the responses to the test made by researcher through WhatsApp.

Research Tool - The researcher has prepared a Yoga and Health Awareness Test in the form of Google form. The test consisted of 20 items which are based on the basic information and knowledge about yoga and health issues. The questions/items are of multiple choice having four options. Each question carries 5 points, means the test was of 100 points. The Google form test has been circulated by the researcher through WhatsApp to the different groups and collected the data.

Data analysis - After observation and analysis of the data, it has been found that, the mean score of the total male and female respondents of the Google test is 75. Few questions were frequently missed or incorrect responded by the respondents.

Result - The respondents have maximum score in the Health and Yoga Awareness Test prepared by researcher in the form of Google form.

Conclusion - It is concluded that the people are so much aware about their health and possess much better knowledge of yoga during this pandemic COVID19 situation.

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Impact of Covid-19 on Education in India

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Abstract -

It is an attempt to documentize the effects of pandemic on various aspects of society. "COVID-19 is an infectious disease caused by a newly discovered virus named as corona virus.¹ More than 4 million cases have been confirmed worldwide, corona became the cause of nearly three lakhs deaths until the date, and count is increasing. Most of the countries are in grave danger. Therefore, WHO characterized COVID-19 as 'Pandemic'? Corona virus affects the number of countries in a lockdown situation. The increasing number of infectious people and the intensity of spreading COVID-19 creates the pandemic. In order to control the pandemic most of the countries preferred lock down as the safest way and solutions. However, the decision of lock down taken by the authorities directly affects on the socio-economic structure of the country. Moreover, it influences the-future-of-learning.

As compare to other countries in India, the rate of death is lower. The first phase of lock down was declared on 24 March 2020 by the government of India. When the lock down was declared, people were inattentive and heedless. It creates some kind of fear, anxiety and confusion among the people. The wheel of economy was stopped. It forced to shut down all other institutions and enterprises. The pandemic affects not only the enterprises and industry but also the physical and mental health of the people. Various social organizations and the government authorities have been working for day and night to handle the pandemic. The government authorities were successful to control the spread of the infectious disease COVID- 19 and the law and order of the country at the cost of economic slowdown. The social, political, religious, cultural, educational, agricultural, as well as administrative wings have been immobilized for more than 50 days.

Keywords - COVID-19, Pandemic, economy, educational institutions, academics.

Introduction -

This research article is an observation of impact of COVID- 19 on various aspects of the human life. As the researcher has been working in the field of education, it is preferred to discuss on the academic and educational aspects of the society. When the Hon. Prime Minister declared the first phase of lock down on 23rd March 2020 nobody was aware of the future happenings and its impact on human life. Everyone feels insecure and anxious. Nobody knows that how many days and how long the lock down and fearful situation caused by pandemic will persist. When the second phase of lock down was declared then people come to know that the previous was the first phase and when the third phase of lock down was declared then it comes to know that the previous was second phase and henceforth.

The pandemic creates just a war like situation in the world. However, the Indian people have been facing the challenge bravely. "In order to ensure safety of the Faculty members/Teachers/ Researchers/Non-teaching staff of educational institutions, under your organization should be permitted and advised to work from home till 31/03/2020".² During this lock down period it is observed that various social organization, NGOs, corporate sector and the government authorities have been working hand in hand. Each organization cooperates with the decision taken by the government. The social organizations, NGOs, educational institutions, health experts, media personnel, representatives of the government have been participating eagerly in the work to control and overcome the pandemic. People were making aware of the facts of COVID-19 and its effects on human health and life. Various online awareness

programs were organized by the government and NGOs to educate the people. The multimedia and television channels play an important role to spread messages as:

- Stay at Home
- Keep safe physical distancing at about 2 meters
- Avoid public gathering.
- Wash hands with any soap for 20 seconds.
- Wearing mask on face.
- Use digital payments.
- Use of ArogyaSetu App.
- Self-isolations.
- How to fight against corona.
- Fight against corona virus and not with the infected person.

These measures have been following by everyone in India. While following these precautionary measures to overcome pandemic, the educational institutions would not run his academic activities. The academic activities were affected by this situation in the country. Its immediate effect is on teaching-learning activities as well as teaching-learning-evaluation pattern and organizing the examination in the month of April –May 2020.

Education and Methods of Teaching -

In India, the education system is traditional and pursuing towards modern and digital. The schooling generally constitutes the most traditional, conservative, rigid, bureaucratic institution since independent India. The aim of education is stated from time by the educational commissions. Since independence, India formed the three education commissions to renovate the colonial education system of the past British India to suit the needs and aspirations of the nation. Apart from the many functions of education, the main function is the development of human resources. The achievement of social and economical development of the nation would be possible through proper education. To achieve these goals priority must be given to universal primary education of eight years, total adult literacy, vocationalization of secondary education and a relevant higher education that can provide ideas for man to shape his future. These ideals of education have been fulfilling by the traditional methods of teaching learning and evaluation. In the course of time, it becomes the

system.

Unforeseen Challenges -

The COVID-19 produced many unforeseen and undesirable impacts. As it is stated in, the introductory part that how pandemic affects each field in the country. However, as a researcher it is restricted to discuss on the effects of pandemic on educational and academic fields. The schools and colleges were in a full-fledged planning to conduct various practical and theory examination “Not only the cases of COVID-19 are increasing rapidly around the world, the deadly virus is taking its toll on various schools, colleges and competitive examinations.”³

In this regard, the education system is shocked and remained silent for a month. Gradually the academicians and government authorities tried to seek solution. As, it is not possible for anyone to reach at the educational institutions for exams. Conducting practical exams is just a thing to say. At most, of the educational level it is important to conduct practical examinations to evaluate knowledge of the aspirants. It is not reliable to judge knowledge of the aspirants only on assignments and theoretical examination.

Psychological Condition of Students’ -

As a researcher, it is decided to contact with the students and the stakeholders. Whenever the responses from the students received, it is found that the students were not aware of the examination schedules. The stakeholders and students were very anxious about their future career. They found themselves in the clutches of lockdown and mental stress. They have been scared about their studies and examinations. In addition, the rumors were spread through social media about the examinations schedules and decisions of the authorities. Therefore, the university authorities formed a special center “counseling and guidance centre”⁴ for students and stakeholders at various places. The students would sought online counseling and guidance from the experts where they will experience and receive genuinely human climate.

Examinations -

The COVID -19 acutely affects the examinations system in the country. Examinations plays very crucial role in education system. Examinations are the way to test the knowledge and skills of the learner. Examinations are essential

in schools and colleges to find out the skills, knowledge and talent the students have achieved. Evaluation system should be used to reflect the index of teacher effectiveness and students' efforts. Examinations reflect the spirit of self-analysis and achievements of the students. The assessment system evaluates the student's ability of learning, analytical power, logical thinking and understanding. Therefore, students prefer to appear for examination as a career and the goal they decided to achieve. However, the circular from "KBC North Maharashtra University Circular"⁵ stated that the government authorities have taken a decision to postpone the examination schedule. Moreover, first year, second year examinations were cancelled for three year degree course. Wherever there is a four/ five, year degree course only the last year examination will be organized. In most of the places student assessments are moving online with trial and error basis.

Shifting and Turning -

In connection with the immediate changes in academic affairs, happenings and the phrase 'Work from Home' the researcher get more valuable information and resources from Dr. Vijay Bachhao as an Online Talk "In the history of education, the year 2020 would be recorded as the year of shifting and turning. Up to March 2020, everything is going on smoothly, satisfactory and traditionally excellent in the academic realms."⁶ The present day education system has undergone many changes since British Raj in India. However, due to COVID 19, the giant wheel of action stopped and every one remains in a lockdown situation. It affects everyone and each enterprises. Moreover, the education and academic realm has been more objectified by the pandemic. The whole academic scenario has been changed. Everyone is trying to make adjust with the situation. The traditional teaching-learning-evaluation pattern has been substantially shifting to digital and virtual pattern. Everybody seems to be hurried in attending online webinars, FDP, workshops on multimedia enriched e-content development etc. The practicing teachers have been eagerly creating the e-content and uploaded on various digital platforms for the students. The face-to-face teaching and learning method will be shifted to virtual, digital and online teaching – learning method. Even the ministry of

MHRD Human Resource Development and UGC have been providing free online courses and teachers training program in order to shift digital and virtual education. Everything has been shifting and turning from offline to online.

Positive Impacts of Pandemic on Education:

While discussing on the effects of pandemic on human life and education system, it is realized that there are some positive aspects of pandemic on education. As the Hon. Prime Minister Narendra Modi noted in his speech on 13th of May "India must ensure to be capable on its own."⁷ The attitude of Indian people is very positive towards new technology. They are very flexible to adopt the digitalization and its uses. In such a background education, institutes are not behind to adopt the new technology. As it is said that education is one of the fastest growing sectors in India. The use of new technology is a central and driving component of this growth. Lockdown proves to be turning point in the education field. During the lockdown, the schools and colleges organized many webinars on variety of topics. The free online faculty development programs were offered by the universities. Meanwhile Google provides digital platform for the academicians and scholars. Many institutions organized online COVID-19 awareness quizzes and programs. The education could be transformed into industry sector. In a near future, the great businesspersons would be turned towards this profitable industry. The students who have a potential to handle the online education system would be flourished with bright careers. The IT industry will be in a great demand to provide the access to online education system. Then the Indian economy will be gear up. The academic schedule and framework somewhat reshuffled but it would not derail the teaching and learning spirit. The innovative teachers create a digital platform to fulfill the educational interludes between the teachers, students, educational institutes and society.

Conclusion -

To sum up COVID-19 is a challenge, and the teachers and the educational institutes have been facing the challenge successfully. It has been predicted that in future the classroom teaching and learning will be replaced by on line teaching-learning process. COVID-19 has brought a big gap in everyone's life. It can be safely said that the issues

and problems aroused during the pandemic would be tackled. The education system in India has a potential to overcome the problems created by COVID-19. Students are the future of the country and teachers have the responsibility to shape them.

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Effect of COVID-19 on Education

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Introduction -

The human being is never been away from the pandemic. History tells us that human beings were suffered by many kinds of pandemic diseases and it is also a history that human being recovered from their effects after some time. COVID-19 is no exception to that but it is exceptional to the previous history of humanity. Human society never experienced such kind of atmosphere as created due to COVID-19 across the globe. Before this crisis, if some pandemic spread then it was in some part of the world, or in a particular region or country. COVID-19 has influenced every corner of the world. His effect on humanity is unparallel. According to WHO, this outbreak covers more than 44 lakh across 216 countries until this moment. COVID-19 has created havoc on humanity. Hence every aspect of human life is influenced deeply due to this global pandemic. The education field is no exception to it. The present paper is an attempt to discuss the impact of COVID-19 on Education in general and on the Indian Education system in particular.

Discussion -

As of 15 May 2020, approximately 1.725 billion learners are currently affected due to school closures in response to the pandemic. It shows the voluminous of the impact of this outbreak on education across the globe. Closure of schools, colleges and institutions is the outcome so that its influence should not spread. One of the most powerful social space i.e. educational institutes is shut down. It leads to many educational complexities also. In the Indian context, in many of the university areas and of many courses, the examination process is incomplete hence their degree programs. But it is not an issue of closing of educational institutes but it affects deeply on the psyche of parents in general and teachers as well as students in particular. The teaching-learning

process is damaged deeply. The situation in search of many possibilities is awaiting. Online teaching is one option. But it is the only option because it needs some necessary infrastructure. Numerous webinars on these issues are organized by educational institutes across India. The Indian education system is one of the largest education systems in the world. It requires huge infrastructural necessity. We do not have sufficient IT infrastructure. Digital India is a government initiative in this regard. But it does not deal with educational infrastructure only. Online teaching cannot be replaced by a real teaching process i.e. face to face teaching. It is a live teaching process. Some experiments are going on by conducting online classes through Zoom App, Microsoft Meet or Google Meet. But it has its own limitations. It seems like a temporary solution to imparting education through online mode. The outcome of this online teaching might be horrible. There are many issues related to IT infrastructure. Technology will play a key role in getting out of this situation. It can also be helpful in blended learning. But training in this regard is utmost important. It is not as easy as operating what's App or any other social media. Examination and assessment are the other most important aspects of the education field. To this moment, examinations of UG and PG courses in many of the states in India have not been conducted. Lakhs of students are waiting to appear for the examinations. The situation created due to COVID-19 has impacted more on these students, on their parents and teachers also. The apex regulatory bodies of the education sector in India have tried to find out the possible solution on these issues. UGC has appointed a committee. Concerned state governments are also in search of a possible solution as this issue is related to the future of millions of students.

Conclusion -

This micro virus that is CORONA has macro effects on humanity. Every sector is damaged. The human race has never been in such turmoil before. The education field is no exception to this global crisis. In the Indian context, Millions of students, their parents and teaching fraternity have been

impacted deeply. Teaching-learning process, examination, assessment process are paralyzed due to this pandemic. To conclude, this global pandemic severely crushed the education system in India.

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Role of Ayurveda as Immunobooster in Prevention of Covid-19

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Abstract -

The new novel corona virus strain is attacking the whole world. Covid19 is spreading widely all over the globe at very fast rate. As there is no vaccine invented till date to successfully stop spreading it, preventive measures play a very important role. Various measures like frequently hand washing, avoiding public places and social gatherings are being followed. But at the same time it is also very essential to focus on improving one's immunity so that the suffering is reduced. Immunity means the defence system of the body to protect us from invading micro-organisms and infectious diseases. Vyadhikshamatva (immunity) is described in Ayurveda and this concept is considered equivalent to immunity. Ayurveda is an ancient system of Indian medicine and followed by every person knowingly or unknowingly since birth. Its main aim is not only treating the disease but also preventing it. Hence an attempt has been made to present various ayurvedic daily regimes to improve immunity and some medicinal plants having immunobooster properties.

Keywords - Covid-19, Ayurveda, Vyadhikshamatva, Bala, Agni

Introduction -

Ayurveda, a natural system of medicine in Indian tradition, was invented more than 3000 years ago. The term Ayurveda is derived from the Sanskrit words Ayur (life) and Veda (science or knowledge)¹. Thus it is a science of life. Health is defined in Ayurveda as a complete balance between the body, mind, and spirit². Any disturbances in them lead to disease. The ability to resist disease and also its physical strength are directly related to its heat energy determining the metabolic process. Most imbalances and diseases can ultimately be traced back to impaired agni. Concepts related to health and diseases are discussed with detail in nearly all classical texts of

Ayurveda. These concepts include knowledge of etiology, symptomatology, therapeutics, various measures to maintain healthy status and reasons behind falling sick. According to Ayurveda, strong immunity is a product of good digestion, strong agni (digestive fire), quality liver functioning & a balanced endocrine system. The immune system is evolved as a defence system to protect us against invading microorganisms & disorders. Vyadhikshamatva described in Ayurveda must be focused along with other preventive measures in this fight against corona virus. The main goal of Ayurveda is maintenance of health first and then treatment of any disorder if it arises. Thus as we know that at present there is no specific treatment or vaccine available for corona virus, the main focus should be on boosting the immunity. The main goal here is to present Vyadhikshamatva as a sword to fight against Covid-19.

Concept of Vyadhikshamatva -

In Sanskrit, the word Vyadhikshamatva is made up of two words: Vyadhi (disease) and Kshamatva (overcome or suppress). Vyadhi occurs only if there is an imbalance between the Doshas (physiological factors i.e. vata, pitta & kapha), Dhatus (tissue systems) and Malas (excretory products of the body)³. The other word Kshamatva means to be patient to suppress anger, to keep resist. Therefore, Vyadhikshamatva means the factor which limits the pathogenesis and opposes the strength of disease⁴. Chakrapani, while commenting on Charak Samhita, gave his view on the term Vyadhikshamatva and explained it in two divisions, as follows:

1. Vyadhi-balavirodhitvam- Individuals' strength to resist the progress of disease.
2. Vyadhi-utpadakpratibadhakatva- Ability of the body to prevent the occurrence of disease.

Increasing Vyadhikshamatva with Bala:

Bala of individual signifies the physical, mental strength of body. Bala counteracts the disordered state of dosha and restore the same to normalcy. Thus there is a great correlation between Bala and Vyadhikshamatva. There are three types of Bala: Sahaj, Kalaj & Yuktikruta⁵.

1. Sahaj - Constitutional strength present since birth. According to the ayurvedic concept of genetics, if parents have healthy genetic makeup same health status is acquired by children.

2. Kalaj - Bala changes according to time season and age. Strength is assumed to be greatest in early morning time of the day, in winter season & at younger age. Naturally lowest at evening, summer & old age. Death rate of Corona is more in old age people as strength to fight disease is naturally low in them.

3. Yuktikruta - Our own lifestyle, food habits & other factors define our yuktikrutabala. Just by following basic concepts of Ayurveda like Dinacharya (Daily routine), Rutucharya (seasonal routine), Matravat Ahara (adequate food intake) etc. can result in increase of one's bala & ultimately Immunity. Yuktikutabala represents acquired immunity, in which disease can be defended against through Ayurveda. Three important focuses for enhancing immunity are rasayan, vyayam and satmya. Rasayan (like chyavanprash) is health-promoting and rejuvenates the whole physiology, producing resistance against disease both physically and mentally. If a person has a strong mind, even serious illness can be faced by the physiology as minor disease. Vyayam is exercise. Daily exercise enhances digestion, strengthens tissue metabolism and promotes immunity. Satmya is suitability. Adapting to wholesome substances and giving up unwholesome substances, to which the physiology has been addicted since birth, also promotes immunity. Balavruddhikara Bhava described in charaksamhita are as follows⁶ -

1. Balavat Deshe Janma - Birth in a country where people are naturally strong
2. Balavat Purushe Janma - Birth in a home of naturally strong person
3. Balavat Kale Janma - Birth in the period of time when people naturally gain strength
4. Sukhascha Kalayoga - Pleasant and

moderate climate

5. Bijaguna Sampat - Excellence of the qualities of sperm and ovum
6. Kshetraguna Sampat - Excellence of the qualities of female reproductive system
7. Ahara Sampat - Excellence of ingested food
8. Sharira Sampat - Excellence of the physique
9. Satmya Sampat - Wholesomeness of various factors responsible for health
10. Satva Sampat - Excellence of the mental faculty
11. Swabhava Samsiddhi - Favourable deposition of the nature
12. Yauvanam - Youth
13. Samharsha - Cheerful disposition.

They positively affect both physical and immune strength of an individual hence taken into consideration.

Lifestyle changes to boost immunity to fight Covid-19 -

Start waking up early at morning before sunrise on 'Bramha Muhurta' says Acharya Vagbhat in Dinacharya⁷. Followed by Vyayama (exercise) of up to half of one's exertion capacity including 'Suryanamaskara' and practicing of various yoga positions can increase digestive capacity and boost immunity. Have a freshly prepared meal everyday in proper quantity. Eat nourishing and easy to digest food avoiding junk and heavy meals. Use more spices like turmeric, cinnamon, cardamom, long pepper, and ginger in diet. Chew tulsi leaves, licorice, neem whenever possible. Make herbal tea using tulsi, black pepper and honey. Tulsi (holy Basil) have potent anti viral capacity and ginger is good for fever and respiratory system. Honey acts as a catalyst for these drugs. Honey having kapha-hara properties penetrates deep channels improving effectiveness of other drugs in use. Drink hot water throughout the day. As main symptoms of corona virus includes fever and shortness of breath above mentioned drugs proves useful. Available in everyone's home, these drugs are of great importance these days.

As we all know that mental health is equally important as physical health focus should be made on maintaining it also. In this crucial period of Covid-19 pandemic everyone is locked in home it is

essential to have mental strength and stability. Meditation and Pranayama work as wonder maintaining peaceful environment within mind and ultimately in surroundings. Disengaging the mind from thoughts and sensory stimulation on a regular basis naturally brings about greater self-awareness and vital energy, thereby enhancing mental/physical strength and overall immunity. To purify the air inside home fumigation (medicated smoke) should be done simply by using karpura, neem leaves, haridra, guggulu, agarwood, sarja, arka etc. collect as many of them possible, dry it and burn in open air taking the fumes to all parts of home.

Some of important medicinal plants useful as immunobooster -

Tinospora cordifolia : It is a deciduous climbing shrub commonly known as Guduchi and found widely distributed in the Indian subcontinent. Guduchi is a powerful detoxifying agent which gets rid of toxic chemicals in liver and blood. This herb increases metabolism which in effect gives you more energy and vitality. Guduchi contains powerful antioxidants and anti-inflammatory property which is useful against viral infections. Tinospora cordifolia supplementation improves the ability of microphages, an immune system cell, to consume their targets⁸. Works well for lowering fevers of all kinds. This wonderful herb helps with anxiety and stress that we encounter in this day and age.

Emblica officinalis - Amalaki, commonly known as the Indian gooseberry, is the term used for the ayurvedic medicinal use of the fruit of the amla tree. It is considered one of the most powerful rejuvenation herbs in Ayurveda. In Sanskrit, Amalaki means 'the sustainer' and has traditionally been prescribed to strengthen the immunity and cool the body. The herb is a strong natural antioxidant containing high levels of vitamin C, making it powerful immune strengthener. The nutritive and healing properties of Amalaki extend to all tissues increasing Ojas, ultimately enhancing energy, immunity and fertility. It supports healthy metabolism, digestion and elimination balances Agni (digestive fire). Presence of tannins in amla maintains its vitamin content even through processing⁹.

Curcuma longa - Haridra, one of the key ingredients in kitchen spices is the ancient super food. The strong antioxidants properties of Haldi

and its many preventive and health benefits are of great use in these days. Turmeric reduces inflammation and oxidative stress on body. Curcumin present in turmeric inhibits inflammatory neutrophils and other mediators thereby reducing the risk of a range of diseases. The golden milk popular nowadays prepared by adding pinch of turmeric in warm milk works well in improving overall health.

Conclusion -

Diseases occurring by attack of external micro-organisms are considered as 'Agantujvyadhi' in Ayurveda¹⁰. After causing pain and discomfort they create imbalance between doshas making it worse. If a person having strong immunity to stop attack of external viruses, incidences of disease could be reduced. Present study focuses on certain ayurvedic concepts that are useful in present situation. Medicinal plants are utilized for the purpose of maintaining the well beings of humans since very long time. Plant based drugs have gained popularity among the general population due to their capacity to treat the cause of diseases with no or least side effects. The capability of medicinal plants to cure diseases which are otherwise non-curable in the rational or modern system has further consolidated the faith of humans in natural approaches. These plants due to their ease of access and acceptability based on historical claims are gaining affinity. In this way we will be able to deal with covid-19 or any other pandemic arising in future.

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Individual Role in Prevention of Corona Virus Infection

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Abstract -

Corona virus has created a critical situation throughout the world. The crisis has affected the all age persons, all business, economy and mental health of human human beings. In our country too, the number of corona virus patient are increasing day by day. To prevent the spread of this disease our prime minister and other administrator announced a lockdown from 22nd march to 17th may 2020. The key to success in this pandemic outbreak is basic knowledge and awareness about the spread of this virus. Hence this study is attempt to provide some basic knowledge and to show individual role to overcome corona crisis with positive approach because in future the condition may be more critical as it is a contagious disease.

Keywords - Corona, virus, pandemic, contagious, individual role.

Introduction -

In late December 2019, a cluster of patients with pneumonia of unknown cause was found in a seafood wholesale market in Wuhan, Hubei Province. First patient of coronavirus was hospitalized on 16 Dec 2019. Reported to WHO on 31 Dec. 2019. World health organization declared a public health emergency on 30 Jan 2020 Human airway epithelial cells were used to isolate a novel coronavirus, named 2019-nCoV, which formed a clade within the subgenus sarbecovirus, Orthocoronavirinae subfamily. They are found in avian and mammalian species. Different from both MERS-CoV and SARS-CoV, 2019-nCoV is the seventh member of the family of coronaviruses that infect humans. The disease caused by this novel coronavirus, spread across the nation within weeks—and then stormed its way across the world. In human beings alpha and beta type of coronaviruses are found.

Objectives of Study -

- To highlight the structure, working of corona virus in human body with its mode of transmission
- To study the measures of preventing from corona virus at individual level.

Data Base and Research Methodology -

In the present study the data is collect from various newspapers, news channels Google, research papers related with corona virus and reports.

Structure of Corona Virus -

- Coronavirus word comes from Latin word crown” due to its projections on the outer side.
- Corona virus is a very small, microscopic bio particle which uses plant or animal body for its division.
- The average diameter of the virus particles is around 120 nm (.12 μ m).
- Coronavirus virions are spherical to pleomorphic enveloped particles.
- The envelope is studded with projecting glycoproteins, and surrounds a core consisting of matrix protein enclosed within which is a single strand of positive-sense RNA (Mr 6×10^6) associated with nucleoprotein. The envelope glycoproteins are responsible for attachment to the host cell and also carry the main antigenic epitopes, particularly the epitopes recognized by neutralizing antibodies. OC43 also possesses a haemagglutin.

Diagnosis -

There is no reliable clinical method to distinguish coronavirus colds from colds caused by rhinoviruses or less common agents. The most useful method for laboratory diagnosis is to collect paired sera (from the acute and convalescent

phases of the disease) and to test by ELISA for a rise in antibodies against OC43 and 229E. Direct hybridization and polymerase chain reaction tests for viral nucleic acid have been developed and, particularly with the latter, are the most sensitive assays currently available for detecting virus.

Transmission of Corona Virus -

It is transmitted from human to human by following ways:

- Respiratory droplets by or sneezing and coughing
- Close contact: within 6 feet or 2 metres.
- Contaminated objects
- Mass gathering
- This disease approximately doubles in community every seven days.
- WHO is assessing ongoing research on the ways COVID-19 is spread and will continue to share new findings on this topic.

Working of Virus in Human Body -

- It enters in body through eyes, nose and mouth.
- It then attaches to cells in the airway that produce a protein called ACE2. The virus infects the cell by fusing its oily membrane with the membrane of the cell. Once inside, the coronavirus releases a snippet of genetic material called RNA. The infected cell reads the RNA and begins making proteins that will keep the immune system at bay and help assemble new copies of the virus. As the infection progresses, the machinery of the cell begins to churn out new spikes and other proteins that will form more copies of the coronavirus.

PREVENTION AT PERSONAL LEVEL

- We should stay aware of the latest information on the COVID-19 outbreak, available on the WHO website, through our national and local public health authority.
- Regularly and thoroughly we should clean our hands with an alcohol-based hand rub or wash them with soap and water atleast for 20 seconds because it will dissolves outer layer of virus and kills

viruses that may be on our hands.

- We should maintain at least 1 metre distance between ourself and others. because when corona positive patient coughs, sneezes, or speaks they spray small liquid droplets with virus from their nose or mouth and it may infect ourself.
- We should remember that virus cannot survive in air it requires living body for survival so to break the life chain of corona virus we should stay at home and obey all the instructions given by government and other responsible authorities.
- When we come together in crowd we may come into close contact with corona positive patient so we should avoid going to crowded places.
- We should avoid touching eyes, nose and mouth because hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to our eyes, nose or mouth and from there, the virus can enter in our body and infect. We should cover mouth and nose with mask and eyes with protective transparent cover.
- We should stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until we recover. The time between exposure to COVID-19 and the moment when symptoms start is commonly around five to six days but can range from 1-14 days.
- If necessary to go outside for any urgent shopping, we should keep at least 1-metre distance from others and avoid touching your eyes, mouth and nose. and if possible, sanitize the things which are going to touch because virus can survive for up to 72 hours on plastic and stainless steel, less than 4 hours on copper and less than 24 hours on cardboard.
- Vegetables and fruits should be washed with water containing alum.
- Antibiotics do not work against viruses; they only work on bacterial infections. COVID-19 is caused by a virus, so antibiotics do not work. Antibiotics should

not be used as a means of prevention or treatment of COVID-19.

- Do exercise and take healthy diet regularly.
- We should respect all the frontline fighter like doctor, paramedical staff, police man and all the person giving services for our basic needs.

Conclusion -

Recently Italy invented vaccine for Corona Virus treatment but still scientists are sincerely trying to discover treatment therapy for COVID-19. At present, we can control this disease and it's transmission by practising hygienic measures and keeping update ourselves with information and role

at individual level.

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Impact of Lockdown Due to Covid-19 on Environment

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Introduction -

In November-December 2019, Wuhan identified a novel infectious disease (COVID-19) in China, which has now turned into a global epidemic. Countries around the world have implemented some kind of lockdown to reduce and reduce its transmission. Outbreaks such as corona or covid-19 have led to a worldwide lockdown today. Due to this situation, factories and big industries have closed down. Road vehicles, trains, airplanes and ships are also seen off. In order to understand the effect that all such conditions seem to have on the environment, an attempt has been made in the present research paper to set some objectives and try to analyze it.

Objectives -

1. To study the effect of Kovid-19 on the environment.
2. Understanding environmental changes in different countries after lockdown
3. To study the changes in air and water pollution

A novel infectious disease of the coronavirus family was identified in late December in Wuhan, China, which was later renamed Covid-19 by the World Health Organization. In January 2020, the World Health Organization (WHO) confirmed the human infection with Covid-19. Later that month, it confirmed a cluster of Covid-19 cases in Wuhan, China, which spread not only to the surrounding area but to the entire country, and its outbreak became an epidemic. Subsequently, the Chinese government locked down the entire country to reduce the spread of the infection and reduce the burden on health facilities. On January 30, the WHO declared a worldwide public health emergency. Outbreaks appear to be exacerbated in February in Iran, Italy and other parts of the world. The covid-19 epidemic seems to have had a profound effect on the environment and climate,

with lockdowns occurring all over the country or around the world. The sharp decline in planned travel seems to have helped reduce air pollution in many regions. The closure of industries and factories has led to a reduction in pollution. All this seems to have had an effect on water pollution as well. In China, lockdowns and other measures seem to have reduced carbon emissions by 25 percent and nitrogen oxide emissions by 50 percent. Scientists told that an Earth system estimate that at least 77,000 lives have been saved in just two months. So much has changed in the environment. We can explain exactly what changes have taken place in the environment due to covid-19 epidemic as following issues

Environmental conditions of different countries after lockdown -

In China, before and after the lockdown, from February 10 to 25, NO₂ emissions appear to have decreased by 20-30. In Spain lockdown reduced NO₂ emissions by 20 to 30% in Spain, especially in major cities such as Madrid, Barcelona and Seville. Transportation closures during lockdowns in Paris and other major cities significantly reduced NO₂ emissions. NO₂ emissions are reduced by 20 to 30% in France. A similar situation exists in Italy. This country also saw a 20 to 30 percent decline in NO₂. Lockdown in the northeastern United States has reduced NO₂ emissions by up to 30%. We see a similar situation in India. Lockdown in India has led to significant changes in air pollution.

Air Pollution -

Air travel in many regions appears to have been reduced due to the coronavirus outbreak and its effects on the industry. According to a report by the Center for Research on Energy and Clean Air, measures such as segregation, travel bans and lockdowns to prevent the spread of coronavirus have reduced carbon emissions in China by 25

percent. In the first month of the lockdown, China produced about 200 million fewer metric tons of carbon dioxide in 2019 compared to the same period last year, due to reduced air traffic, oil refining and coal consumption. Of course, the cuts would have saved at least 77,000 lives. This is how much air pollution is reduced in China. During the January 1 to March 11, 2020 lockdown in Italy, the European Space Agency reported a significant decrease in nitrous oxide emissions from cars, power plants and factories in the Po Valley region of northern Italy.

Many factories and businesses have closed, and with fewer cars on the road and fewer planes in the sky, our natural environment is slowly recovering. In some areas, a 40% drop in NO₂ to 2019 levels in January and February is equivalent to the removal of 192,000 cars. Between late January and February 2020, nitrogen dioxide (NO₂) levels in cities and industrial areas in Asia and Europe fell by 40 percent compared to the same period in 2019, according to a report by the European Space Agency.

Two weeks after the UK announced a nationwide lockdown on March 23, pollution in some cities fell by 60% compared to the same period in 2019. NASA polluted NO₂ in New York and other major metropolitan areas in the North. In March 2020, the East USA was 30% lower than the monthly average for the March 2019 period. In India the results were similar too; March 22 was the 'Janata Curfew', following which, a significant dip in air pollution levels was measured across the country. Cities like Delhi, Bengaluru, Kolkata and Lucknow saw their average Air Quality Index (AQI) staying within two digits.

Water Pollution -

In March, the rapid rise in coronavirus infections in Europe and North America, as well as in Asia, forced schools, offices and factories to limit their operations as the entire population was ordered to stay at home. As a result, air pollution seems to be reduced along with air. By April 2020, signs of aquatic recovery are appearing.

According to a report from the Venice Mayor's Office, the water level in the canals in Venice was high and the flow of water and visibility of fish was felt. Increased water clarity and reduction of air pollution on waterways have been mentioned.

Demand for fish and fish has declined due to the downturn in all countries. As a result, fishing has declined. A reduction in fishing is expected to increase fish biomass, and some fish, such as herring, are likely to double their biomass in European waters. In India, after the lockdown, pollution seems to be on the rise, with air pollution declining and water bodies being cleaned up. Significant improvements have been made so far in the Yamuna and Ganga rivers since the implementation of the nationwide lockdown. According to the Central Pollution Control Board's (CPCB) real-time water monitoring statistics, the average water quality of the Ganges seen in recent days is 27 points, suitable for bathing and wildlife and fisheries.

Conclusion -

Once the coronavirus has arrived in nations, better enforcement of environmental, transportation, and industry regulations should be a priority to reduce the harmful effects of human action on the environment.

When the international community struggles to regain its accepted normalcy, the impact of widespread awareness of the epidemic must be considered. One, the atmosphere, came back faster than we thought. It would be utterly irresponsible to turn our backs on that knowledge once social gaps and nationwide lockdowns are no longer necessary.

As long as the coronavirus crisis keeps economic activity low, emissions will remain relatively low. But is environmental reform a sustainable environmental reform? It is important to understand this. Because when crises are resolved, emissions often return to earlier levels.

So many environmental promoters are demanding that bailout packages from transportation companies and industrial manufacturers include provisions to significantly reduce emissions in their future operations. Such provisions can prevent the level of pollutant emissions from rising to pre-crisis levels.

Overall, the effects of the corona virus lockdown in all countries can be seen in the global environment. However, this effect is not permanent, it is temporary, all countries can return to the environment when the situation arises, so the government of each country needs special

efforts to protect the environment.

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Responsibility of Individual in prevention of Corona virus infection

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Abstract -

The outbreak of corona virus disease 2019 (COVID-19) has undoubtedly affected the whole world and has created a global health crisis that has had a deep impact on the way we perceive our world and our everyday lives. Not only the rate of contagion and patterns of transmission threatens our sense of agency, but the safety measures put in place to contain the spread of the virus also require social distancing. On 30 January 2020, the WHO Director-General determined that the outbreak of coronavirus disease (COVID-19) constitutes a Public Health Emergency of International Concern. As the outbreak continues to evolve, Member States are considering options to prevent introduction of the disease to new areas or to reduce human-to-human transmission in areas where the virus that causes COVID-19 is already circulating. India has also reported cases from states and the government is trying to contain the spread of the disease. The purpose of this paper is to discuss what is social distancing Quarantination individual role, medical, health, food, supplies, precaution to taken in controlling spread of this diseases.

Keyword - Coronavirus, COVID-19, Individual, Quarantine, WHO

Introduction -

Corona viruses are a large family of viruses which may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease. It is the infectious disease caused by the most recently discovered corona virus. This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019.

The most common symptoms of COVID-19 are fever, tiredness, and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat or diarrhea. These symptoms are usually mild and begin gradually. Some people become infected but don't develop any symptoms and don't feel unwell. Most people (about 80%) recover from the disease without needing special treatment. Around one out of every six people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people and those with underlying medical problems like high blood pressure, heart problems or diabetes are more likely to develop serious illness. People with fever, cough and difficulty breathing should seek medical attention.

People can catch this virus from others who have the virus. The disease can spread from person to person through small droplets from the nose or mouth which are spread when a person with COVID-19 coughs or exhales. These droplets land on objects and surfaces around the person. Other people then catch virus by touching these objects or surfaces, then touching their eyes, nose or mouth. People can also get it by breathing in droplets from a person with COVID-19 who coughs out or exhales droplets. This is why it is important to stay more than 1 meter (3 feet) away from a person who is sick.

What is social distancing and why is it important?

Social distancing refers to actions taken to stop or slow down the spread of a contagious disease. For an individual, it refers to maintaining enough distance (6 feet or more) between yourself and another person to avoid getting infected or infecting someone else. School closures, directives to work from home; library closings, and cancelling meetings and larger events help enforce social distancing at a community level.

Quarantine of persons -

The quarantine of persons is the restriction of activities of or the separation of persons who are not ill but who may have been exposed to an infectious agent or disease, with the objective of monitoring their symptoms and ensuring the early detection of cases. Quarantine is different from isolation, which is the separation of ill or infected persons from others to prevent the spread of infection or contamination. Introducing quarantine measures early in an outbreak may delay the introduction of the disease to a country or area or may delay the peak of an epidemic in an area where local transmission is ongoing, or both.

Home Quarantination guidelines -

Wear a triple layers medical mask appropriately when in same room with the patient ; Hot touch /handle front portion of mask during use ; Change the mask immediately if it get wet and dirty with secretions; Discard mask after use and perform hand hygiene after disposal ; Avoid touching own face, nose or mouth ; Ensure proper hand hygiene with patient of his/her immediate environment ; Use disposable gloves while handling the patient perform hand hygiene before and after removing gloves .

Provide food to the patient in their room ; Avoid exposure to potentially contaminated items in his immediate environment ; Wear disposable gloves while cleaning utensils and dishes used by patient with soap, water and detergent in avoid direct contact with body fluids particularly oral or respiratory secretion ; Use triple layer medicals mask and disposable gloves while cleaning and handling surfaces, clothing or linen used by patient.

Clean the clothes and other linen used by the person separately using common house hold detergent ; Disinfect the masks using ordinary bleach solution (5%) and sodium hypochlorite solution (1%) disposed it off either by burning or deep burial ; Clean and disinfect frequently touched surfaces daily with sodium hypochlorite solution ; Perform hand hygiene before and after removing gloves.

Make sure that patient follows the prescribed treatment ; Monitor his/her health with daily temperature monitoring and report promptly if he/she develops any symptoms suggestive of covid - 19

Individual role in prevention of corona virus -

- Regularly and thoroughly clean your hands with an alcohol-based hand rub or wash them with soap and water. Why? Washing your hands with soap and water or using alcohol-based hand rub kills viruses that may be on your hands.
- Maintain at least 1 metre (3 feet) distance between yourself and anyone who is coughing or sneezing. Why? When someone coughs or sneezes they spray small liquid droplets from their nose or mouth which may contain virus. If you are too close, you can breathe in the droplets, including the COVID-19 virus if the person coughing has the disease.
- Avoid touching eyes, nose and mouth. Why? Hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to your eyes, nose or mouth. From there, the virus can enter your body and can make you sick.
- Make sure you, and the people around you, follow good respiratory hygiene. This means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze. Then dispose of the used tissue immediately. Why? Droplets spread virus. By following good respiratory hygiene you protect the people around you from viruses such as cold, flu and COVID-19.
- Stay home if you feel unwell. If you have a fever, cough and difficulty breathing, seek medical attention and call in advance. Follow the directions of your local health authority. Why? National and local authorities will have the most up to date information on the situation in your area. Calling in advance will allow your health care provider to quickly direct you to the right health facility. This will also protect you and help prevent spread of viruses and other infections.
- Keep up to date on the latest COVID-19 hotspots (cities or local areas where COVID-19 is spreading widely). If possible, avoid traveling to places –

especially if you are an older person or have diabetes, heart or lung disease. Why? You have a higher chance of catching COVID-19 in one of these areas.

Medications and health supplies for an extended stay at home -

Try to stock at least a 30-day supply of any needed prescriptions. If your insurance permits 90-day refills, that's even better. Make sure you also have over-the-counter medications and other health supplies on hand.

Medical and health supplies -

Prescription of medications on fever, pain, cough, cold, antidiarrhea; prescribed medical supplies such as glucose and blood-pressure monitoring equipment ; fever and pain medicine, such as acetaminophen ; antidiarrheal medication ; thermometer ; fluids with electrolytes ; soap and alcohol-based hand sanitizer ; tissues, toilet paper, disposable diapers, tampons, sanitary napkins ; garbage bags.

Food and house hold supplies -

Consider keeping a two-week to 30-day supply of nonperishable food at home. These items can also come in handy in other types of emergencies, such as power outages or snowstorms.

Canned meats, fruits, vegetables, and soups ; frozen fruits, vegetables, and meat ; protein or fruit bars ; dry cereal, oatmeal, or granola ; peanut butter or nuts ; pasta, bread, rice, and other grains ; canned beans ; chicken broth, canned tomatoes, jarred pasta sauce ; oil for cooking ; flour, sugar; crackers ; coffee, tea, shelf-stable milk, canned juices ; bottled water; canned or jarred baby food and formula ; pet food ; household supplies like laundry detergent, dish soap, and household cleaner.

Precautions and measures -

Precautions need to be taken at the time of grocery shopping.

In the grocery store, maintain at least six feet of distance between yourself and other shoppers. Wipe frequently touched surfaces like grocery carts or basket handles with disinfectant wipes. Avoid touching your face. Wearing a cloth mask helps remind you not to touch your face and can further help reduce spread of the virus. Use hand sanitizer before leaving the store. Wash your hands as soon

as you get home.

If you are older than 65 or at increased risk for any reason, limit trips to the grocery store. Ask a neighbor or friend to pick up groceries and leave them outside your house. See if your grocery store offers special hours for older adults or those with underlying conditions. Or have groceries delivered to your home.

Precautions need to be taken at the time of unpacking groceries.

Recent studies have shown that the COVID-19 virus may remain on surfaces or objects for up to 72 hours. This means virus on the surface of groceries will become inactivated over time after groceries are put away. If you need to use the products before 72 hours, consider washing the outside surfaces or wiping them with disinfectant. The contents of sealed containers won't be contaminated.

After unpacking your groceries, wash your hands with soap and water for at least 20 seconds. Wipe surfaces on which you placed groceries while unpacking them with household disinfectants.

Thoroughly rinse fruits and vegetables with water before consuming. And wash your hands before consuming any foods that you've recently brought home from the grocery store.

Conclusion -

We are the most important weapon to win war against coronavirus disease. Hand washing, avoiding touching the face, limiting contact with others, staying home if unwell (Quarantine) are the most important factors to prevent COVID 19 disease. People (individual) should follow safety standards and precautions which are mentioned by WHO and government. As per CDC (Centers for disease control and prevention) and WHO recommendation all people should wear cloth face masks in public places where it is difficult to maintain safe distance from others. This will help slow the spread of the virus from asymptomatic people or people who do not know they have contracted the virus.

This new virus outbreak has challenged the all fields all over world because till date there is no such kind of vaccines or there are no any medicines or any specific treatment to cure COVID-19. Life is precious and we all are connected as members of the human race. This outbreak has taught us the

lesson of coexistence. Therefore it is responsibility of every individual of nation to stand unitedly with the nation to overcome the catastrophe called "COVID-19"

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Impact of COVID-19 Related Lockdown on Behavior of Birds.

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On 24 March 2020, the Government of India under Hon'ble Prime Minister Narendra Modi ordered a nationwide lockdown for 21 days, restricting movement of the entire 1.3 billion population of India as a protective measure against the COVID-19 pandemic in India¹. It was ordered after a 14-hour voluntary public curfew on 22 March, followed by enforcement of a series of regulations in the country's COVID-19 affected regions.^{2,3} The lockdown was placed when the number of confirmed positive coronavirus cases in India was approximately 500.¹ Hon'ble PM said that the only solution to control the spread of coronavirus was to break the cycle of transmission through social distancing.⁶ He also added that the lockdown would be enforced more strictly than the Janata Curfew.⁷

The lockdown had slowed the growth rate of the pandemic by 6 April to a rate of doubling every six days,⁴ and by 18 April, to a rate of doubling every eight days.⁵ The Government of India confirmed India's first case of Coronavirus disease 2019 on 30 January 2020 in the state of Kerala, when a university student from Wuhan travelled back to the state.¹³ COVID-19 related lockdown has diversified effects on plants, animals and ecosystem as well.

The nationwide lockdown that brought 1.3 billion people to a stop has apparently caused positive changes in the environment, at least temporarily. Skies are clearer and river water seems cleaner.⁸ Air pollution has dropped to unprecedented levels across the world as major cities and countries impose lockdown measures to curb the spread of the coronavirus.⁹

The study of the effect of COVID-19 Lockdown seems to have a positive impact on animals and birds. It is a lockdown for people, but freedom for birds and animals, while humans stay in during lockdown, animals, birds reclaim spaces.

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Reduced human interference and decreased pollution level in the environment in India have led to reclaim their space in the ecosystem up to certain extent. Many migratory bird species which migrate from other parts of the world have extended their stay in India. The nesting behavior, availability of food, comfortable water bodies are some of the reasons that affected the lengthening of their stay over here in India. The negative effect also visible due to non availability of food to some birds like pigeons.

Restricted human intrusion and reduced pollution levels have helped the birds reclaim their space in the ecosystem up to certain extent

A report from Kerala revealed that many bird species which migrate from other parts of the country known as partial migratory birds have now extended their stay at the Therthangal and Melaselvanoor - Keelaselvanoor bird sanctuaries.¹⁰ This information is elaborated by Ramanathapuram Forest Range Officer S. Sathish. He further stated that, "Usually, species like open bill stork, spot-billed pelican, painted stork, grey heron, spoonbill and ibis depart from here by March. However, this year, they have extended their stay, thanks to the lockdown," he also added "A good northeast monsoon and comfortable storage in water bodies across the district had led to an increase in the nesting of birds in these two sanctuaries during the last season," he says. Forest department officials released fingerlings into water bodies last year. The tanks and feeder channels were desilted to ensure that there was good water storage.

The another report from Bijnor indicates that with flutter of wings migratory birds lifted their tiny frames into the air, one after the other, stirring the still water of the lakes in Terai region of northern plains.¹¹ There was no traffic around to drown the din, and to fill the void left by their departure. As

the mercury soars, flocks of migratory birds are taking flight back to Central Europe, Russia, Tibet, Mongolia and other colder regions. While some are off to the wetlands in other parts of the country. They stayed longer this time over two weeks. And in some parts of Hastinapur Wildlife sanctuary, falling in Meerut and Bijnor districts, parcels of migratory birds can still be marked.

Forest officials and experts attribute the birds' prolonged stay to the cold weather in March and also to the factors arising out of negligible human activity due to the lockdown, including the absence of emissions. These birds usually start their retreat from the wetlands in the mid of March when mercury shoots up. But, this year, they have started it now. Even at this time, some species are being spotted on the banks of wetlands in Harewali and Amangarh areas," said divisional forest officer (DFO) M. Semmaran. This might be due to low temperature and pollution-free atmosphere. The lockdown also helped in making the climate favourable for the birds. There was no emission, no traffic on roads and negligible human interference in the region. It all led to the prolonged stay of the migratory birds.

The birds return to the higher reaches during the summer season due to the abundance of nesting territories. With the melting of snow, they also find weeds and grass in plenty there. The birds spotted in the sanctuary were identified as Greylag Goose, Bar-headed goose, Ruddy Shelduck, Gadwall, Eurasian Wigeon, Spot-billed duck, Northern Shoveler, Northern pintail, Eurasian teal, Red-crested Pochard, Common Pochard, Ferruginous Duck, Tufted Duck, Little Grebe etc.

Coronavirus lockdown gives animals rare break from noise pollution

The COVID-19 lockdown could become a unique natural experiment in noise pollution. Some of the world's most vocal animals viz., birds and whales, might already be benefiting from a quieter environment. The birds send signals to each other through song are a means of communication for survival. Without the ability to sing, hear and be heard, birds would have a difficult time finding a mate or defending their territory from predators. Lockdown provided a quieter environment for their communication through songs and signals and helped to ease their nesting.

According to the World Health Organization (WHO), noise pollution affects over 100 million people across Europe and, in Western Europe alone, road traffic accounts for premature deaths equivalent to the loss of roughly "1.6 million healthy years of life." Take the disturbance to human health out of the equation, and noise remains a big source of pollution for the other inhabitants of the planet as well, namely, animals.

Threatened species of birds return amid lockdown

Many species of birds, animals, and reptiles were marked within the lock-down which was a sporadic sight. Kottarakkara of Kollam district in Kerala which is popular for its diverse species of birds sighted few species of near-threatened birds in the recent lockdown phase.¹² A few beautiful species of bird which were spotted during the lockdown week were Malabar Hornbill, Indian Paradise Flycatcher, Racket-tailed Drongo, Ash Hornbill, Black foot red oriole, common tailorbird, and Green Bee-Eater. These birds are mostly spotted in the eastern part of the Kollam district.

These birds were tagged in near-threatened species but once these were found very commonly as stated by the locals of Kollam. After the reduction of forest land, these birds drifted into the deep forest which is why it was difficult to spot them. The bird lovers have a theory of why these birds are being spotted outside the forests, among the human residential areas now.

According to Dr. Jean Jose, an Assistant Zoology Professor at St. Gregorios College in Kottarakkara, the withdrawal of people back in their homes for a longer period has to be the cause of these birds spotting. There has been a significant amount of reduction in the air, water and noise pollution after the 21-day lockdown which has extended to phase two. This is good news for all the bird watchers in Kollam and its nearby districts. Polachira is the favorite hotspot for migratory birds as it witnesses almost 150 types and varieties of birds in the season. Lockdown has been a boon for the migratory birds and other wild animals that are being spotted often after the lockdown was imposed.

Pigeons at risk of starvation over coronavirus empty streets

Pigeons are very loyal to their local habitat.

They live in tall buildings like malls, churches, railway station buildings etc. They do not leave their habitats. A German animal rights group is warning that pigeons are struggling to find enough food amid the coronavirus lockdown. Empty city centers mean no leftovers for them to feast on and thousands may die.

A German animal rights charity called for a campaign to save pigeons from starvation during the coronavirus pandemic. German Animal Welfare Association has warned that the nationwide lockdown may have cleared the country's habitats of pigeons. Thousands of pigeons are not self-isolating but are struggling to find enough food.

The birds, which normally feast on tiny leftovers dropped by residents leaving cafes and takeaways, are now going hungry. Due to lockdown thousands of these birds would die unnecessarily. "Since it is the breeding season, many young animals will die in their nests if parents can no longer feed them."

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कोरोना (कोव्हीड-१९) च्या लॉकडाऊनमुळे अर्थव्यवस्थेवर परिणाम

डॉ. जयश्री पुरुषोत्तम सरोदे

सहयोगी प्राध्यापक, अर्थशास्त्र विभाग, दादासाहेब देविदास नामदेव भोळे
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प्रस्तावना :-

आपण वाचतो की शंभर वर्षांपूर्वी भारतामध्ये १९१८ साली स्पॅनिंग फ्लूची साथ आली त्यात हजारो माणसं मेली. आपण वाचतो की १९४५ साली बंगालमध्ये प्रचंड मोठा दुष्काळ आला आणि आकडेवारी तर पुरेशी नाही पण त्यात तीस लक्ष माणसं कुपोषणामुळे उपवासामुळे मेली.

अशाच प्रकारचा एक इतिहास कोविड-१९ नावाचा इतिहास आपल्या डोळ्यासमोर घडतो आहे. एक रोगतंतू निसर्गात पहिल्यांदाच निर्माण होतो काय आणि त्याचा एक आरएनए वायरस म्हणून तो प्रगट होतो. त्याचा रोग तयार होतो. त्याला नाव दिले आपण कोविड-१९, पण सुरुवातीला फक्त काही लक्षण ताप, खोकला, न्यूमोनिया त्या रोगाची चीनमध्ये साथ काय होते, बघता-बघता ती जागतिक साथ काय होते एखाद्या वादळासारखा रोग आणि त्याची साथ जगभर आता पसरली आहे.

पूर्वी हे घडायला शंभर वर्षे लागायची. जगाच्या एका भागात निर्माण झालेला रोग सर्वत्र पसरायला आता जणू काय फास्ट फॉरवर्ड मुव्ही जावी तस तीन चार महिन्यांच्या काळात आपल्या डोळ्यासमोर आपण बघतच राहिलो.

याला औषध काय वापरायची ? इतिहासात हा रोग पहिल्यांदाच त्यामुळे अजून कोणाला माहित नाही. त्यामुळे हायड्रॉक्सिलोरोक्वीन प्रभावी ठरत का ? अँझिथ्रोमायसीन प्रभावी ठरत का ? की अजून काही ! सर्व प्रश्नचिन्हच

याच मॉडेलिंग करता येत की हा रोग कसा पसरेल, किती लोकांना होईल ? याच संख्याशास्त्र आहे याच मॉडेलिंग आहे. व्यक्ती-व्यक्तीच वागणं यांच्याध्ये किती महत्त्वाच आहे ? माणूस हात स्वच्छ धुतो की नाही ? आपल्याला माहित आहे की हात स्वच्छ धुण्याने हा रोग टळतो. जवळपास दिडशे वर्षांपूर्वी सेमेलेवीसने हात स्वच्छ धुतल्याने बाळंतपणातला जंतुदोष व मातामृत्यू कमी होतात हे शोधून काढलं. त्यानंतर आज अचानक हात स्वच्छ धुणं इतकं महत्त्वाचं होऊन गेलय.

आपल्या डोळ्यासमोर हा रोग नियंत्रित करण्यासाठी स्थानिक पातळीपासून, राष्ट्रीय पातळीपासून, जागतिक पातळीवरती नेतृत्वाच्या वेगवेगळ्या प्रतिसाद / प्रतिकार

पध्दती दिसू लागल्या. खाजगी आणि सरकारी वैद्यकीय क्षेत्र ही परिस्थिती कशी हाताळते, तेही आपल्या नजरेसमोर घडत आहे. कम्युनिटी कंट्रोल कसा करायचा, नॅशनल कंट्रोल कसा करायचा ? ग्लोबल कंट्रोल कसा करायचा याचं मोजमाप कस करायचं ? किती लोकांना संसर्ग झाले, किती मृत्यू झाले याच मोजमाप कस करायचं ? याची आर्थिक किंमत काय ? रुग्णाला खर्च काय ? पासून देशाला भुर्दंड काय ? जगाला याचा आर्थिक भुर्दंड काय पडणार आहे ?

आता आपल्यासमोर ही एक आपत्ती गंगा वाहते आहे. जिज्ञासेने कुतूहलाने, अभ्यासाच्या अंगाने आपण तिला स्पर्श करू शकतो. सेवेच्या संधीच्या अंगाने स्पर्श करू शकतो तुमचा प्रतिसाद कसा राहिल आणि म्हणून हा लेख लिहिण्याचा प्रयत्न केला.

संशोधन उद्दिष्ट :-

- १) कोविड १९ साठी सरकारने कोणती आर्थिक पाऊले उचलली त्याचा अभ्यास.
- २) लॉकडाऊनमुळे अर्थव्यवस्थेवर झालेल्या विपरित परिणामांचा अभ्यास.
- ३) कोरोनानंतरचे नवीन जग कसे ?

कोरोना संकटाला लक्षात घेवून भारत सरकारने योग्यवेळी काही प्रभावी पावले उचलली त्यामुळे जगातील तमाम साधन संपन्न देशांच्या तुलनेत भारताची परिस्थिती मोठ्या प्रमाणात नियंत्रणात आहे. विदेशातून येणाऱ्या नागरिकांची स्क्रिनिंग, त्यांना क्वारंटाईन करून देशभरात लॉकडाऊन करणे, सीमा सील करणे, हवाई सेवांसह रेल्वे व रस्ते परिवहन प्रतिबंधित करणे हेच कारण आहे की, भारतात कोरोना संक्रमण लोकसंख्येच्या तुलनेने तितक्या वेगाने पसरले नाही. जितकी शक्यता वर्तविली जात होती. याशिवाय केंद्र सरकारने कोरोना संकटापासून बचावाकरिता अनेक आर्थिक पाऊले उचलली यासाठी की सामान्य जनतेस त्रासापासून वाचवले जावे.

कोविड १९ च्या संकटापासून वाचविण्यासाठी भारत सरकारने केलेले उपाय :-

- १) सरकारने कोविड १९ इकॉनॉमिक रिस्पॉन्स टॉस्क फोर्सचे गठण करण्याची घोषणा केली आहे ही सर्व हितधारकांच्या संपर्कात राहिल.

- २) गरीब प्रभावित लोक व मजूरांना लक्षात घेऊन १.७० लाख कोटी रूपये आर्थिक सहाय्यता मदतीची घोषणा करण्यात आली.
- ३) प्रधानमंत्री गरीब कल्याण अन्न योजनेच्या अंतर्गत जवळपास ८० कोटी लोकांना तीन महिन्यांपर्यंत ५ किलो अतिरिक्त गहू किंवा तांदूळासोबत १ किलो डाळ मिळेल.
- ४) नॅशनल सोशल असीस्टन्स प्रोग्रामच्या अंतर्गत जवळपास ३ कोटी दिव्यांग, जेष्ठ नागरिक आणि विधवांना तीन महिन्यांपर्यंत दोन टप्प्यांत १ हजार रूपये अतिरिक्त मिळतील.
- ५) उज्वला योजनेच्या अंतर्गत पाच किलोचा गॅस सिलेंडर वापरणाऱ्या गरीब कुटुंबांना तीन महिन्यांपर्यंत आठ रिफिल व १४.२ किलो सिलेंडर वापरणाऱ्या कुटुंबांना तीन सिलेंडरपर्यंत सरकारकडून सूट मिळेल. ८.३ कोटी गरीब महिलांना पुढील तीन महिन्यांपर्यंत मोफत गॅस सिलेंडर मिळेल.
- ६) पीएम शेतकरी सन्मान योजनेचा पहिल्या हप्त्याच्या रूपात जवळपास ८.६५ कोटी शेतकऱ्यांना १३.८५५ कोटी रूपये वितरित केले गेले.
- ७) जवळपास २० कोटी महिलांच्या खात्यात तीन महिन्यांपर्यंत दर महिन्यात ५०० रूपये जमा केले जातील.
- ८) कोरोना वायरस महामारीशी लढण्यासाठी आरोग्य कर्मचाऱ्यांना प्रति व्यक्ती ५० लाख रूपयांचा वीमा कव्हर प्रदान केले जाईल.
- ९) अशा संख्या जिथे १०० पेक्षा कमी कर्मचारी आहेत किंवा ९० % कर्मचारी १५ हजार पेक्षा कमी वेतन मिळवतात त्या संस्थांच्या पीएफ खात्यात सरकार तीन महिन्यांपर्यंत कर्मचारी व नियोक्ता दोन्हीचे १२-१२ टक्के पैसे टाकील.
- १०) कोविड १९ शी निगडित माहिती देण्यासाठी व लोकांमध्ये जागरूकता निर्माण करण्यासाठी आरोग्य सेतू नावाचे मोबाइल ॲप लाँच केले गेले.
- ११) देशभरातील लोकांना आवश्यक सामान पोहचविण्यासाठी २० लाख किरकोळ दुकाने उघडण्याची योजना याचे नाव सुरक्षा स्टोअर्स असेल.
- १२) एका विशेष प्रावधानांतर्गत आता कर्मचारी भविष्य निधी खात्यातून तीन महिन्यांचे वेतन काढता येईल.

- १३) व्यक्ती वा व्यावसायिकांना टॅक्स रिफंडमध्ये १८००० कोटी रूपयांची तात्काळ मदत करण्याची घोषणा करण्यात आली.
- १४) वित्तीय वर्ष २०१९-२० करिता आयकर रिटर्न करण्याकरिता अंतिम दिनांक ३० जून २०२० पर्यंत वाढविला, उशिरा भरणा केल्यास व्याजदर कमी करून ८ % करण्यात आले आहे.
- १५) कोविड १९ आपातकालीन प्रतिक्रिया व आरोग्य प्रणाली तत्परता पॅकेजच्या रूपात १५००० कोटी रूपये मंजूर केले गेले. कोरोनाच्या रूणांकरिता १ लाख बेडची व्यवस्था करण्यात आली आहे. ६०० पेक्षा अधिक दवाखाने फक्त कोरोनाच्या उपचारासाठी कार्यरत आहेत.

कोरोनामुळे अर्थव्यवस्थेवर विपरित परिणाम :-

कोरोनाची समस्या आरोग्याची समस्या राहिली नसून लॉकडाऊनमुळे ती आर्थिक, सामाजिक आणि काही ठिकाणी मानसिक समस्या झालेली आहे. देशात जीवितहानी होवू नये म्हणून किंवा कोरोना या आजाराची साखळी तुटावी म्हणून सरकारने लॉकडाऊन हा योग्य पर्याय निवडला असला आणि त्यामुळे काही प्रमाणात कोरोनाच्या प्रसाराच्या वेगाला आळाही बसत असला तरी दुसरीकडे मात्र या लॉकडाऊनमुळे आपल्या अर्थव्यवस्थेला खूप अशी किंमत मोजावी लागणार आहे. लॉकडाऊन मुळे अर्थव्यवस्थेवर खालीलप्रमाणे विपरित परिणाम घडले.

१) बेरोजगारात वाढ :-

फेब्रुवारी ते एप्रिल अखेरपर्यंत केवळ दोन महिन्यात देशात सरासरी वीस टक्के बेरोजगारी वाढीस लागली आहे. १२ कोटी १५ लाख नोकऱ्या संपुष्टात येऊन या बेरोजगारांची फौज तयार झाली. बांधकाम, रस्ते बांधणी, सेवा क्षेत्र आदिमधील सर्वाधिक मजूरांना आपला रोजगार गमवावा लागला आहे. केंद्र सरकारने १ लाख ७० हजार कोटीचे पॅकेज जाहीर करून अशा वर्गाला अन्नधान्याची मदत करण्याची घोषणा केली होती. भारतीय अर्थव्यवस्था निरीक्षण केंद्राने गेल्या आठवड्याच्या अखेरीस जाहीर केलेल्या साप्ताहिक अहवालानुसार भारतात २७.११ % बेरोजगारी वाढली आहे. महाराष्ट्रात हे प्रमाण २०.९ % इतके आहे. बिहार ४६.६० %, झारखंड ४७.१० %, तामिळनाडू ४९.८० %, उत्तर प्रदेश २९.५० %.

फेब्रुवारीमध्ये भारतातील बेरोजगारीचे प्रमाण ७.८० % होते. लॉकडाऊनमुळे त्यात १९.३१ टक्क्यांनी वाढ होऊन आता हे प्रमाण २७.१ % झाले आहे. विख्यात अर्थतज्ज्ञांनी या परिस्थितीवर बोट ठेवून ठामपणे सांगितले आहे की, लोकांच्या हाती पैसा आला पाहिजे जेणेकरून आर्थिक व्यवहार

वाढीस लागतील. उत्पादन व्यापार, दळणवळण आदि वाढीस लागेल.

२) लहान व्यवसायिकांसमोर रोकड संकट :-

सूक्ष्म व लघु आणि मध्यम आकाराच्या उद्योग क्षेत्रास देशात कृषीनंतर सर्वाधिक रोजगार देणारे क्षेत्र मानले जात आहे. मात्र हे नोटबंदी आणि जी. एस. टी. च्या फटक्यातून बाहेर पडले नव्हते. यादरम्यान कोविड १९ महामारीच्या संसर्गात या क्षेत्राचे कंबरडे मोडले आहे असे बंगरूळुमध्ये उद्योजक जयंत मुथा यांनी अडचण मांडत सांगितले. लाखो लहान व्यवसायिक एक तर ते आपल्या कर्मचाऱ्यांच्या रोजगारात कपात करतील किंवा देणार नाही त्यातच सरकारने कोरोना संक्रमण कंट्रोलसाठी जे लॉकडाऊन उपाय केला त्यामुळे आर्थिक उत्पादन पूर्ण ठप्प झाले आहे. यामुळे लहान व्यवसायिकांसमोर आव्हान उभे राहिले आहे. यामध्ये रोकड टंचाईच्या संकटाचाही समावेश आहे. सरकारनुसार भारताच्या २.९ लाख कोटी डॉलर (२२० लाख कोटी रूपये) च्या अर्थव्यवस्थेत सुमारे एक तृतीयांश हिस्सेदारी छोटा व्यवसाय करणाऱ्यांची आहे हे क्षेत्र ५० कोटी कामगारांना रोजगार देते. एवढे सर्व मजूर रोकड संकटामुळे बेरोजगार किंवा विना उत्पन्न राहतील.

३) भारतीय अर्थव्यवस्थेचे ७-८ लाख कोटींचे नुकसान :-

या देशव्यापी बंदमध्ये बहुतांश कारखाने आणि व्यवसाय ठप्प आहेत. विमान उणे रद्द आहेत. रेल्वे सेवाही बंद आहेत, वाहन आणि लोकांच्या प्रवासावरही निर्बंध आले आहेत. यामुळे ७० % आर्थिक उत्पादन, गुंतवणूक, निर्यात आणि अत्यावश्यक वस्तु वगळता अन्य उत्पादनांची विक्री ठप्प आहे. सेंट्रल इन्स्टिट्यूशनल रिसर्च ने सांगितले की, संकटामुळे देश पुन्हा २०२०-२१ मध्ये एक अंक वृद्धी नोंदवण्याच्या मार्गावर पोहचला. टाळेबंदीमुळे अर्थव्यवस्थेला रोज ४६४ कोटी डॉलर (३५००० कोटी रू.) चे नुकसान होत आहे.

४) भारताचा विकासदर लॉकडाऊनमुळे यावर्षी तीन टक्क्यांहून कमी :-

कोरोना संकटामुळे करावे लागलेले देशव्यापी लॉकडाऊन व अनपेक्षित वाढलेल्या खर्चामुळे नियोजित अर्थसंकल्पाचे पार विस्कटून गेलेले गणित याचा परिणाम म्हणून १ एप्रिलपासून सुरू झालेल्या नव्या वित्तीय वर्षात भारताचा विकासदर गेल्या ३० वर्षांत कधीही नव्हता एवढा खाली घसरलेल असे चिंताजनक भाकीत जागतिक बँकेने केले आहे. बँकेने आताच प्रसिध्द केलेल्या साऊथ एशिया इकॉनॉमिक फोकस रिपोर्ट मध्ये असे नमूद केले की, सन २०२०-२१ या चालू वित्तीय वर्षात भारतीय अर्थव्यवस्थेचा विकासदर १.५ ते २.८ टक्के राहिल असे चित्र दिसत आहे. खरच तसे झाले तर सन १९९१ मध्ये खुल्या आर्थिक धोरणाचा अवलंब केल्यापासून देशाचा आर्थिक

विकासाचा हा सर्वात कमी दर असेल वित्तीय क्षेत्रातील दीर्घकालीन दौर्बल्यामुळे भारतीय अर्थव्यवस्था आधीच मंदावलेली असतांना हे नवे संकट आल्याने त्याचा अधिक जास्त दुष्परिणाम जाणवले.

५) जागतिक अर्थवस्थेला मंदीमुळे उभारीसाठी दोन वर्षे लागतील :-

कोरोना विषाणू महामारीमुळे जागतिक अर्थव्यवस्थेला गेल्या २ वर्षात ५ लाख कोटी डॉलर (३८० लाख कोटी रू.) पेक्षा जास्त नुकसान होऊ शकते. हा अंदाज जपानच्या वार्षिक उत्पादनापेक्षा जास्त आहे. वॉल स्ट्रीटने दिलेल्या इशान्यानुसार ही १९३० नंतरची सर्वात मोठ्या मंदीसारखी स्थिती आहे. वॉल-स्ट्रीट वॅक्सने या मंदीस अल्पकालीन राहण्याचा अंदाज व्यक्त केला आहे. मात्र या कारणामुळे अर्थव्यवस्थांना होणाऱ्या नुकसान भरपाईत दीर्घ अवधी लागेल आर्थिक व महसुली प्रोत्साहनांनंतरही सकल राष्ट्रीय उत्पादनांना महामारीच्या प्रथम स्तरावर पोहचण्यात २०२२ पर्यंतचा अवधी लागेल या अर्थतज्ज्ञांच्या म्हणण्यानुसार हे नुकसान विकसनशील देशांच्या जीडीपीसमान आहे. ज्यांनी २००८-०९ व १९७४-७५ च्या आर्थिक मंदी पाहिली आहे. मार्गन स्टेनलीनुसार सरकारकडून आक्रमक रूप अंगीकारल्यानंतरही विकसित देशात जीडीपी महामारीच्या पहिल्या स्तरापर्यंत पोहचण्यास २०२१ च्या तिसऱ्या तिमाहीपर्यंत वेळ लागू शकतो.

कोरोनानंतरचे नवीन जग :-

नफ्याच्या मागे धावणाऱ्या सर्व अर्थव्यवस्थांना समाजाकडे बघायला आतापर्यंत फार वेळ नव्हता परंतु आता तसे चालणार नाही. कोरोना काळात अमेरिकेसारख्या विकसित राष्ट्रातसुद्धा हेल्थ केअरची टंचाई आहे केवळ गेल्या दोन महिन्यांमध्ये संपूर्ण जग बदलले आहे. सर्व जग ढवळून निघालयं. यानंतरचे किमान २ वर्षे आपली फार वेगळी जाणार आहे. त्यामुळे आता चा अर्थ आता वेगळा लावावा लागणार आहे. पूर्वी आपण म्हणजे त्याऐवजी आता आणि अशी शब्द रचना यापुढे बोलायला लागू एवढा मोठा उलथापालथ करणारा हा प्रसंग आहे. असे मला वाटते.

१८० देशांना कोरोनाचा तडाखा बसला आहे. आता कोरोनाचे कम्प्युनिटी ट्रान्सफर झालेले आहे. म्हणजे आपण आता तिसऱ्या टप्प्यात प्रवेश केलेला आहे. काही दिवसातच या आजारचे आक्राळ रूप आपल्याला समाजात दिसायला लागेल. कारण फार मोठ्या प्रमाणावर याचा संसर्ग झालेला आहे. भारतात एवढ्या झोपडपट्ट्या आहेत त्यात लोक दाटीवाटीने राहतात. एका-एका खोलीला ६-७ लोक राहतात. त्यांना म्हटले तर कुठे पाळायचा. कोरोना संक्रमण रोखण्यासाठी साबणाने स्वच्छ हात धुणे आवश्यकच. परंतु भारतातील ४८ % ते ५० % लोकांकडे पुरेसे पाणी नाही. संपूर्ण जगावरच हे

आरिष्ट थोडक्यात आटोक्यात आले तर ते २००८ च्या मंदीसारखे होईल. पण जर ते नाही झाले तर मात्र १९२९ च्या महामंदीसारखी परिस्थिती निर्माण होईल. त्यावेळी अमेरिकेत २३ % बेकारी होती. आज अमेरिकेत ३२ % बेकारी वाढली आहे. भारतात सुद्धा २३ % बेकारी आहे. २००८ ची जी मंदी होती. ती मागणी कमी मुळे निर्माण झाली होती. परंतु आता जे आरिष्ट आहे ते फक्त मागणी कमी होण्यानेच नाही तर पुरवठा कमी होण्याचे सुद्धा आहे संपूर्ण पुरवठा साखळी कमी झाली. छोटे-छोटे उद्योग तर बुडतीलच आणि मग मोठे उद्योगसुद्धा कसे उत्पादन करणार.

आपल्या देशाचा जीडीपी हा २ % जी वाढत होता असे अरुण सुब्रमण्यम चे मत होते तर दिल्लीचे अरुण कुमार यांच्या मते तो फक्त १ टक्क्यांनीच वाढत आहे. आता तर जगाचा जीडीपी २ % एवढा खाली येईल असा अंदाज व्यक्त केला जात आहे.

या भयानक परिस्थितीत आपण टिकाव धरू शकलो असतो जर आपली आरोग्य व्यवस्था चांगली असती तर, ती अतिशय वाईट आहे. गेल्या ३० वर्षांपासून समाज कल्याण, आरोग्य, शिक्षण यावरील खर्चावर प्रचंड कपात केली आहे. त्यामुळे आपल्याकडे डॉक्टरांची संख्या फार कमी म्हणजे १००० लोकसंख्येमागे ०.५ डॉक्टरांचे प्रमाण, पाकिस्तानमध्ये हे प्रमाण ०.७ आहे. चीनमध्ये १.५ आहे आणि इतर सर्व प्रगत राष्ट्रांमध्ये ते ३ ते ४ एवढे आहे. म्हणजे प्रगत राष्ट्रांमध्ये आपल्यापेक्षा ६ ते ८ पटीने प्रमाण जास्त आहे.

हॉस्पिटल बेडचा विचार केला तर १००० लोकांमागे ०.५ एवढे बेड आपल्या भारतात आहे. चीन मध्ये ४.३४ म्हणजे आपल्यापेक्षा ८ पट आणि इतर सर्व राष्ट्रांमध्ये ४, ५, ६ असे आहेत. ही कोरोना अगोदरची स्थिती आहे. आता कोरोनानंतर काय होईल हा कठीणच प्रश्न आहे. त्यामुळे एकंदरित परिस्थिती फार वाईट होईल. गरीबांना त्याचा फटका जास्त बसेल. अमेरिकेतही परिस्थिती फार वेगळी नाही तिथे सुद्धा ५० % लोकांना हॉस्पिटलमध्ये जाणे परवडत नाही कारण इन्शुरन्स कंपनी आणि औषधी कंपनी यांचे जे एक रॅकेट आहे. त्यामुळे ही परिस्थिती आहे. भारतात सुद्धा हीच परिस्थिती आहे. या परिस्थितीचा गरीबांना मोठ्या प्रमाणात फटका बसतो. हॉवर्डच्या स्टडीमध्ये २५% लोक यामुळेच मेले आणि ते जाण्याचे कारण त्यांना हॉस्पिटलमध्ये जाणे परवडत नाही म्हणून ते घरीच मेले. दरवर्षी ४५००० लोक हेल्थ केअर नसल्यामुळे मरतात असा हॉवर्डचा स्टडी आहे. आणि २०१९ मध्ये जे होता त्यामध्ये सांगितले होते २५ % लोकांना हॉस्पिटलमध्ये न गेल्यामुळे ते मेले.

अमेरिकेत २००७-०८ मध्ये व्हॅनटीलेटरची संख्या वाढविण्याचा निर्णय घेतला होता. न्युपोर्ट नावाच्या कंपनीने

ते करायचे ठरवले पण त्या कंपनीने ७ लाख असतांना फक्त २ लाखाला विकायला ते तयार झाले होते. ४०००० व्हॅनटीलेटर बनविण्याचा कॉन्ट्रॅक्ट त्या न्युपोर्टला देण्यात आला पण कोवेरियन नावाची कंपनी होती त्या कंपनीने केवळ आपली स्पर्धा म्हणून ती न्युपोर्ट कंपनी विकत घेतली आणि नंतर सांगितले की आम्हाला तो प्रोजेक्ट परवडणार नाही आणि तो खर्ची केला. याचा अर्थ आताच्या नफ्याच्या मागे धावणाऱ्या अर्थव्यवस्थेत समाजाची खरी काय गरज आहे यापेक्षा फक्त एकमेकांची स्पर्धा, नफा यामुळे समाजाकडे दुर्लक्ष केले, याचे परिणाम सर्व क्षेत्रावर खूप होणार आहे आणि म्हणून कोरोनानंतरचे जग हे वेगळच पाहायला मिळेल.

१६५ देशांमध्ये शाळा कॉलेज बंद झाले आहे. १५० कोटी विद्यार्थ्यांवर याचा परिणाम झाला आहे. ८७ % विद्यार्थ्यांवर याचा परिणाम झाला याची एक चांगली बाजू ती म्हणजे - चालू होईल की काय असे वाटते. कोरोनावरती लस निघायला १८ ते २४ महिने लागतील आणि औषध निघायला ६ ते ८ महिने नक्की लागतील. औषधाने सर्वच बरे होतील असे नारी निदान माणस मरणार नाही तोपर्यंतचा काळ सतत माणसाच्या मनात भीतीचे वातावरण राहील.

म्हणून एवढ्या काळात कुठलेही काम, शिक्षण, करमणूक, प्रवास, पर्यटन, उद्योग, रिटेल, वितरण, हॉटेल या सर्व क्षेत्रांवर जोपर्यंत लस किंवा औषध निघत नाही तोपर्यंत प्रचंड प्रमाणात परिणाम होणार आहे.

प्रत्येक वेळेस ६/६ फूट अंतर ठेवून नाटक बघण किंवा सिनेमा, प्रवास, खेळ हे शक्य होणार नाही म्हणजे जीवनातील आनंदच काही काळ मिळणार नाही.

उद्योग, कंपनी हे बंद म्हणजे लोकांच्या मिळकतीवर त्याचा परिणाम होईल कामच जर लोकांनी केले नाही तर अर्थव्यवस्था ठप्प होईल. अशा वेळी माणस कोरोनाने मरतील की भूकेने मरतील हा प्रश्न सर्व जगालाच भेडसावणारा आहे. म्हणून ट्रम्प सातत्याने म्हणतात. की आणि की ही दुविधा मनःस्थिती आपल्याला सातत्याने जाणवणार आहे. अशा वेळी आपल्याला अगदी हळूहळू काही उद्योग चांगले प्लॅन करून सुरू करावे लागतील.

करमणूकीच्या बाबतीत चीनमध्ये ७०००० थियेटर बंद पडली, भारतामध्ये सुद्धा हजारो थियेटर, मल्टीप्लेक्स बंद झाली, टी. व्ही. वरील कार्यक्रमसुद्धा जुनेच दाखविणे चालू म्हणजे त्यांची काम बंदच आहे. सर्व खेळ, हॉटेलस, रेस्टॉरंट, बार बंद होतील किंवा अतिशय भितीने नियमांचे पालन करूनच सुरू राहतील. निदान औषध मिळेपर्यंत तरी असेच चालू राहील. प्रवास तर सद्यः परिस्थितीत ९० % बंदच आहे आणि पर्यटन तर २०२०-२१ पर्यंत विसरूनच जावे लागेल.

जागतिकीकरणामुळे लोकांच्या नौकरीची अनिश्चितता

वाढली आहे. जागतिकीकरणामुळे १० ते २० % लोकांचा फायदा झाला परंतु बहुसंख्य जनता ही असंघटीत क्षेत्रात काम करते त्यांचे हक्क, अधिकार फीक्स नाही आज नोकरी आहे, उद्या नाही अशी त्यांची अवस्था झाली. संपूर्ण सुरक्षितता गेली. कोरोना संकटामुळे तर आता बेकारांचे प्रमाण वाढेल त्याचा त्यांच्या मानसिकतेवरही परिणाम होईल. समाजात अस्थिरता, विषमता कमी केल्याशिवाय लोकांचे नैराश्य चिंता कमी होणार नाही या परिस्थितीमुळे अमेरिकेत ४.७ कोटी लोक बेकार होतील. ती बेकारी ३३% होईल. १९२९ च्या महामंदीच्या वेळेस जी २५ % होती. ४४००० कॅनेडीअन घरांमध्ये १ तरी बेकार आहे. जर्मनीमध्ये ५ लाख कंपन्यांनी त्यांच्या कामगारांना घरी बसायला सांगितले आहे.

अर्थव्यवस्थेवर जो परिणाम होईल तो खूप मोठा होईल. जगाच्या जीडीपी साधारण २ % घटेल, ऋचीर शर्मा यांनी भविष्याचा वेध व्यक्त केला की जगात फार मोठी मंदी होणार त्यामुळे बेकारांची संख्या वाढेल अनेक कंपन्या कर्जबाजारी होतील अनेक सरकार कर्जबाजारी होतील त्यांना खर्च खूप करावा लागेल. या कर्जबाजारीपणामुळे अर्थव्यवस्थांमध्ये निर्माण होतील.

कोरोनानंतरच्या काळात चिंता, राग, नैराश्य, झगडे, हिंसा, भिती, अनिश्चितता, गृहकलह, घटस्फोट या सर्वच प्रमाण साधारण ३० % वाढेल. जागतिकीकरणआधीच खूप विषमता निर्माण झाली. १ टक्का लोकांकडे ५८ % संपत्ती आहे. उत्पादनाच्या बाबतीत दुसऱ्या देशांवर अवलंबित्व वाढले, उत्पादन हे झाले. कच्च्या मालापासून ते तर उपभोग

योग्य वस्तू तयार होईपर्यंत त्या उत्पादन प्रक्रियेचे असल्यामुळे संपूर्णपणे तयार मालापर्यंत संपूर्ण चैन जी एकमेकांमध्ये गुंफली गेली. परंतु आता अशा जागतिक आरिष्टाच्या वेळी उत्पादनाच्या बाबतीत कोणत्याही देशावर अवलंबित्व ठेवणे योग्य नाही संपूर्ण वस्तू आपल्याच देशात उत्पादन करणे योग्य होईल किंवा त्याला पर्याय शोधणे योग्य होईल. उदा. चीनवर आपले अवलंबित्व कमी होईल.

यामुळे राष्ट्रवाद वाढेल उत्पादन खर्च वाढेल, नफा कमी होईल, सर्व्हीसेस कडून मॅनिफॅक्चरिंग कडे भर दिला जाईल. एक ते दीड वर्षात जेव्हा कोरोनावरती औषध मिळेल तेव्हा पुन्हा सर्व जग वेगळ्या पध्दतीने काम करतांना दिसेल म्हणून कोरोना पूर्व व कोरोना नंतर असे असे काळाचा उल्लेख केला जाईल.

संदर्भ ग्रंथ :

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- २) संपादकीय लेख, दैनिक लोकमत वृत्त पत्र, दि. १३ एप्रिल २०२०
- ३) डॉ. अभय बंग, लेखक-जेष्ठ समाजसेवक, पब्लिक हेल्थ अभ्यासक यांचा दि. ९ एप्रिल २०२० मधील ऑक्सीजन पुरवणीतील लेख
- ४) श्री. समीर गायकवाड यांचा दि. १२ एप्रिल २०२० चा दिव्य दैनिक दिव्य मराठी, रसिक पुरवणी मधील लेख
- ५) दैनिक मधील लेख दिव्य मराठी, दि. १५ एप्रिल २०२०
- ६) संपादकीय लेख, दि. ८ मे २०२० चा दैनिक लोकमत
- ७) अच्युत गोडबोले यांचे वरील चॅनेलवरील लेक्चर
- ८) आनंद देशपांडे यांचे वरील चॅनेलवरील लेक्चर
- ९) डॉ. सुहास पळसीकर यांचे वरील चॅनेलवरील लेक्चर
- १०) डॉ. अभय बंग यांचे वरील चॅनेलवरील लेक्चर

लॉकडाउननंतर 'लग्ने' ठरु नयेत विघ्ने

एल. जे. गवळी

मराठी विभाग

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प्रस्तावना -

कोरोना लॉकडाउनमुळे काही सकारात्मक गोष्टी -

१. ५४/५५ दिवसात व्यसनी लोकांचे व्यसन अनायसे थांबले.
२. गंगा, तापी, गोदावरी, नर्मदा इ. नद्या अत्यंत स्वच्छ झाल्या.
३. स्त्रीयांवरील अत्याचार ०% वर आले व रोडावरचे अपघात बंद झाले व गुन्हेगारी थांबली.
४. सधन विद्यार्थी या लॉकडाउनच्या काळात स्मार्टफोन माहिती तंत्रज्ञानाचा वापर, यु-ट्यूब, ई-लायब्ररीच्या माध्यमातून शिक्षणाची भुक भागवीत आहे. एकीकडे आदिवासी पट्ट्यातील असंख्यविद्यार्थी स्मार्टफोन दुरच पण साधा मोबाइलही नसल्याने शिक्षण हक्कापासून वंचित आहेत
५. लग्नांमध्ये होणारा अवाढव्य खर्च थांबला. इथून पुढे हीच परंपरा रुढ व्हायला हवी. यात माणूस कर्जबाजारी होणार नाही.
६. लोकांचा पीझा, बर्गर, सोयाबीनचील्ली, मंच्युरियन, फ्रास्टफूड इ. आहार चक्र बंद करून लोक घरातीलच अन्न खाण्यात धन्यता मानायला लागले.
७. शरीराला किती तरी ड्रेसांची आवश्यकता नसून मोजकेच कपडे लागतात. याचे आत्मभान आले. स्त्रीयांचा ब्यूटीपार्लरचा पैसा वाचला.
८. ७०% आजरांना औषध उपचारांची गरज नसते. ते घरगुती उपयांनीच बरे होऊ शकतात याची खात्री झाली.
९. आत्मविश्वास, इच्छाशक्ती, योग्य व्यायाम, योग्य उपचार आणि मानसिक संतुलन, योग्य आहार घेतला तर पेंशट ठणठणीत बरे होतात याचा प्रत्यय आला.
१०. बाळ जन्मल्यानंतरचा बारश्याच्या खर्च व माणूस मेल्यानंतरचा 'उत्तरकार्यविधी' देखील खर्चीक न करता मर्यादीतच करावा.

११. पोलीसबंधु, पोलीसभगिनी, सरकारी डॉक्टर, खाजगी डॉक्टर, परिचारीका/नर्स, आरोग्यकर्मचारी, सफाई कर्मचारांचे ५४/५५ दिवसातील योगदान तमाम जनता विसरणार नाही याचे भान आले.

१२. तमाम जनतेने श्रीमंत, गरीब, वैभव, सत्ता संपत्तीचा कुठलाही मिजास न बाळगता लॉकडाउनच्या काळात जुळालेली लग्ने नो बस्ता, नो हळद, नो मंडप, नो घोडा, नो वऱ्हाडी, नो पंगत, नो रुसवा, नो फुगवा अशा स्वरूपात करावीत. कारण 'लॉकडाउन नंतरच्या काळातील लग्ने ठरु नयेत विघ्ने'.

तमाम भारतवासीयांनो आपणास माझा घरात बसल्या बसल्या शारीरिक आंतर ठेऊन नमस्कार! बंधुनो समोरचा अदृश्य शत्रु आपल्यावर चाल करून येत आहे. त्याचे कर्तव्य तो निभावत आहे. आपण घरातच लॉकडाउन केल्यामुळे बऱ्यापैकी सुरक्षित राहण्याचे क्रेडिट देशाचे पंतप्रधान मा. मोदीसाहेब व महाराष्ट्राचे मुख्यमंत्री मा. उद्धवजी ठाकरे साहेब यांच्या कडेच जाते. अश्या नीटनेटक्या नियोजनपूर्वक यशस्वितेकडे वाटचाल करीत असतानाच आपण इतर देशातले चित्र पाहिले तर चिन, वूहान, अमेरिका, फ्रान्स, इटली, जपान, येथे पिकांवरील कीटक फवारणीने जसे हजारोने पटापट मृत्यू पावतात तशा पद्धतीने माणसांची प्रेते दिसत आहेत. प्रेतांचा अंत्यसंस्कार देखील कोरोनाच्या लागणला घाबरून रुढी परंपरेने केला जात नाही. इतके दुर्दैव आहे. बाप मेला तर पत्नी व मुलगा देखील त्या बापाच्या किंवा पतीच्या प्रेताशेजारी येवू शकत नाही. भाऊ वारला तर बहीण भावाचे शेवटचे अंत्य दर्शन - निव्वळ चेहरा बघू शकत नाही. आईचा चेहरा मुलगी पाहू शकत नाही. मुलीचा चेहरा जन्मदात्री आई पाहू शकत नाही. भाऊ भावाचा चेहरा पाहू शकत नाही. प्रेताची दुर्गंधी बाहेर येवू नये म्हणून प्लास्टिकच्या कितीतरी पदरी वळकटीत प्रेत बंदीस्त करण्यात येते. अंत्यविधीला ४-५ माणसांनी अंत्यविधीच्या वेळेस प्रेत जाळण्यात येते. इतकी काळजी घेतली तरच घरातील इतर माणसे वाचू शकतात. एवढी दहशत कोरोनाची आहे. अशा या भयावह यम-यात्रेत आपण चुकून कोरोनाच्या

विळख्यात सापडू नये म्हणून भारतभरचे पोलीस विभागातील मा. पी. आय साहेब, मा. ए. पी. आय साहेब तसेच सर्व पोलीस बंधु, पोलीस राईटर, पोलीस गाडी चालवणारे पोलीस ड्रायव्हर, पोलीस लेडीज विविध चौका-चौकात उभे राहून कधी गाणी, कधी कविता, कधी शेरशायरी करून, कधी जोर बैठका योग-व्यायाम इ. ची सात्विक शिक्षा करून आपणास कोरोना होवू नये यासाठी डोळ्यात तेल घालून आपले कर्तव्य निष्ठेने निभावत आहेत. भारतवासीयांनो! आपण मात्र जिच्या लागण ने अमेरीकेतील जंगलची राणी (वाघीन) कंठ आळवित त्रस्त झाली आहे. अशा महाभयंकर कोरोनाला न घाबरता दवाखान्याचे-मेडीकलचे खोटे नाटे कारण सांगून रस्त्यावर फिरताना आढळलोनी पोलीस बंधूंनी शिक्षा केली तर ती वंदनीयच बाब म्हणावी लागेल. नव्हे ते पोलीसबंधूंचे भारत मातेवरील सच्चे प्रेमच म्हणणे इष्ट वाटते.

बंधुनो! माझ्या पोलीस भावांना एवढेच वाटते की माझा 'भारतीय भाऊ' जगला पाहिजे. माझी भारतीय भगिनी जगली पाहिजे. माझी 'भारतीय आई' जगली पाहिजे. एकुणच माझा भारत देश जगला पाहिजे. ही व्यापक भावना पोलीस भावांमध्ये आहे. पोलीस बंधु जेव्हा कर्तव्या वरून घरी जातो ना; तेव्हा त्यांच्या मनात देखील आपल्यामुळे घरातील लोकांना तर कोरोनाची लागण होणार नाही ना! आपण बरेच तास विविध लोकांच्या संपर्कात जातो तेव्हा आपण हा आजार घेवून घरी तर नाही जात ना! घरात शिरल्यावर पत्नी हात-पाय धुवायला पाणी काढून देईल. माझ्या जवळून जाईल तेव्हा मला न जाणे खोकल्याची उबळ येईल! न जाणे शिंक येईल! न जाणे मला ठसका येईल! न जाणे एखादा विषाणु तीच्या शरीरात प्रवेश करेल. माझ्या अंधोळीच्या टॉवेलने माझ्या लाडक्या मुलाने तोंड वगैरे पुसले तर! मुलीने माझ्या खाऊसाठी पैश्यांच्या निमित्ताने हात घातला व त्यामुळे मुलीला लागण झाली तर! माझ्या कप बशीतच माझ्या मम्मी पपांनी चहा घेतली व त्यांनाच ती लागण झाली तर असे विचारचक्र पोलीसभावांचे मनामध्ये थैमान घालत आहे. कधी कधी कोरोना पूर्ण संपू द्यावा मगच एकदाचे घरी जावे तो पर्यन्त जावू नये. असेही विचार पोलीस भावांच्या मनामध्ये येत आहेत. लहानशा लेकराला, लेकीला छातीशी कवटाळावे; त्यांच्या डोक्यावरून हात फिरवावा. पत्नीशी बोलावे असे त्यांनाही वाटते. पण तमाम भारतीय पोलीस बांधव हा कोंडमारा ही दमछाक, ससेहोलपट आपल्यामुळे सहन करीत आहेत.

या लॉकडाउनच्या काळात कोरोनाचं संकट मोठं आहे. हे सर्वश्रुत आहे. तरीही धीर न सोडता सर्व मिळून सांघिकरीत्या सकारात्मक विचार करणे हे मोठं नैसर्गिक हत्यार आपल्या सर्वांच्याच हातात आहे. शेवटी आत्मीकबल किंवा मनोबल हे कोणत्याही संकटात प्रभावी शस्त्र ठरते. ते आत्मीकबल

वाढवणे गरजेचे आहे. यासाठी घराघरांतील वातावरण हे जेवढे आनंदी-उल्हासीत करणे गरजेचे आहे. एखाद्याला विनोद येत असेल, तर त्याचा विनोद सर्वांनी ऐकायला हवा त्याला दाद द्यायला हवी. कोणाला भजन म्हणता येत असेल त्याने भजन म्हणायला हवे. कोणाला कविता येत असेल त्याने कविता गायला हरकत नाही. कोणाला सुंदर मिमिक्री येत असेल त्याने मिमिक्री करायला हवी. कोणीही असो इतरांनी त्याला शाबासकीची पाठीवर थाप द्यायला हवी. तीपण मनापासून; अन्यथा त्या कलाकाराचाही कोंडमारा होऊ शकतो.

आज भारतात एका दिवसाला रस्त्यावरील अपघातात मरणाच्यांची संख्या सरासरी ४१० इतकी आहे. जर नेहमी सारखीच परिस्थिती असती तर या सरासरी नुसार गेल्या-

- लॉकडाउनच्या दिवसापासून आजपर्यंत साडेसहा हजार लोकांचे प्राण गेलेच असते. आज या लॉकडाउनमुळे अपघातांचे प्रमाण ८०% नी कमी झाले आहे. म्हणजे घरातून बाहेर न पडल्यामुळे ही पण एक चांगली बाजू विचारात घेणे महत्वाचे वाटते.
- आज भारतातली गुन्हेगारी कमी झाली आहे. बेंगलोर मध्ये गेल्या आढवड्यात एकही चेन स्नॅचिंगच्या घटनेची नोंद झालेली नाही. दिल्लीमध्ये सार्वजनिक ठिकाणी स्त्रियांवर होणारे अत्याचार चक्र ०% वर आले.
- गटा-गटातली हाणामारी थांबली तसेच गाड्या घोड्यांची, प्राण्यांचीचोरीदेखीलथांबली.
- W.H.O. च्या आकडेवारीनुसार भारताचा वार्षिक आत्महत्या दर एक लाखाला १० आहे. यानुसार गेल्या १५ दिवसांत भारत देशात तब्बल ५ हजार आत्महत्या झाल्या असल्या; त्या झाल्या नाहीत. आणखी २५०० खून व हत्या थांबल्या आहेत. आत्महत्या करणं जवळपास बंद झालं आहे. एकुणच याना त्या कारणांनी गेल्या ५४/५५ दिवसातील ५०/५५ हजार लोकांचे मृत्यू थांबले आहेत. शहरांमधील विविध कंपन्यांमध्ये मशिनरी अंगावर पडल्याने होणारे मृत्यू, शॉटसर्किट झाल्याने मृत्यू, अपंगत्व, पाण्यात बुडून, रेल्वे अपघातातील मृत्यू हे सर्व मृत्यू आज थांबले आहेत.
- कोरोनामुळे होणारा मृत्यूचा आकडा गुणकाराच्या पटीने जरी वाढत असेल तरी हे टळलेलं नुकसानाचा हिशोब देखील लक्षात घेणे महत्वाचे वाटते.
- खरे तर 'लॉकडाउन' हा काही मृत्यू किंवा हे नुकसान टाळण्याचा मार्ग नाही. हे जे काही घडतंय

- म्हणजे आपण वाचलो आहोत. ते सावध भूमिकेमुळे नकळता का होईना हे चांगले काम आपल्या सर्व्यांचाच सहकार्याने किंवा चांगल्या नम्रतेच्या, संस्करामुळे आपल्याकडून झाले आहे.
- आपल्याला करोडो रुपये व लाखोंचे मनुष्यबळ वापरून जे काम शक्य झाले नाही ते निसर्गाने अगदी सहजपणे नळकत घडवून आणले ते म्हणजे गंगेसारख्या गोदावरी, नर्मदेसारख्या इ. नद्या गेल्या ५४/५५ दिवसात ६०ते७०% स्वच्छ झाल्या आहेत.
 - वायू प्रदूषणात गेल्या १५ दिवसात तब्बल ७१% घट झाली आहे. हवेतील नायट्रोजन डायॉक्साईडचे प्रमाण ५२ हून १५ वर आले आहे. म्हणून खुप मोठे नुकसान झाले डांगोरा पिटण्यापेक्षा आनंदीत राहायला हवे. उत्साहीत, उल्हासित राहायला हवे. घरात बसून शासनाला मदत करायला हवी. दीड किलो वजनाचा आपला मेंदू, तीन अब्जे न्यूरॉन पेशी व त्याच्या किमान दहापट संख्या असणाऱ्या गलायल पेशी यांनी बनलेला आहे. त्यामुळे पाहणे, विचार करणे, स्पर्श, वास आणि परिसराची जाणीव आदि हे सर्व मेंदूच्या कार्यावर अवलंबून आहे. त्याला देखील एका चांगल्या कामात गुंतवायला हवे .
 - विनाकारण आपण अतीकाळजी पोटी आपल्या आप्तस्वकीयांना, मित्रमंडळींना, नातेवाईकांना, मनात भीती निर्माण करणारे व्हिडिओ, भाषणाची क्लिप, अंत्यविधीचे व्हिडिओ, पेशटला होणाऱ्या त्रासाचा व्हिडीओ हे व्हायरल करणे प्रथम थांबवायला हवे. कारण आरोग्य म्हणजे केवळ रोगाचा अभाव नसून ते आहे शारीरिक मानसिक व सामाजिक स्वास्थ्य. असे जागतिक आरोग्य संघटनेचे (W.H.O.) मतआहे.
 - W.H.O च्या मते ७०% आजरांना औषध उपचारांची गरज नसते ते घरगुती उपयांनी बरे होऊ शकतात २५% आजरांना साध्या उपचारांची, साध्या तपासण्यांची गरज असते. केवळ ५% रुग्णांना अत्याधुनिक तपासण्या व योग्य उपचारांची गरज असते. वरील ७०% गटातील अंदाजे ४०% आजारात मानसिक तान तणावाचा शरीरावर परिणाम झालेल्या असतो. ज्याला सायकोसोमाटिक आजार असे म्हणतात. तर इतर ३०% आजार हे विविध विषाणुंमुळे झालेले असतात.

- विषाणुंमुळे झालेले आजार शरीराच्या रोगप्रतिकारक शक्तीच्या जोरावरच आपोआप बरे होतात. त्यांना कोणत्याही प्रतिजैविकांची गरज भासत नाही. असे सुप्रसिद्ध शल्यचिकित्सक डॉ. रवी बापट म्हणतात तरी आपण ते घेत असतो हा भाग वेगळा.

दुसरी सर्वात महत्त्वाची गोष्ट म्हणजे नकारात्मक संदेशाचा भडिमार व नेहमी नेहमी कोरोनाच्या बातम्या, कोरोना पेशंटांचे व्हायरल होणारे व्हिडिओ, भितीदायक कोरोना संदर्भातली भाषणे कोरोनापेक्षाही मोठी समस्या निर्माण करू शकतात. म्हणून जास्तीत जास्त सकारात्मक विचार करायलाहवा. सकारात्मक पुस्तके वाचायला हवीत, विनोदी नाटके पहायला हवीत, सकारात्मक गोष्टी ऐकायला हव्यात, प्रेरणादायी आत्मचरित्रे वाचायला हवीत, सकारात्मक पिकचर बघायला हवेत उदा. 'महाभारत-रामायण' या सीरीयल तसेच विनोदी मालिकांमध्ये 'चला हवा येऊ द्या', 'महाराष्ट्राची हास्यजत्रा', 'तारक मेहता का उल्टा चष्मा' या कला प्रकारांनी मनाला आनंदी व प्रसन्न करून घ्यायला हवे. कारण मनाला, बुद्धीला ताण देणाऱ्या बाबींचा मज्जासंस्थेवर आणि रोगप्रतिकारक शक्तीवर परिणाम होत असतो. म्हणून आपल्या शरीरात अतिरिक्त एनझाइम्स अंतर द्रव्य व हार्मोन्स आंतःस्त्राव तयार होतात.

या दोन्हीचा परिणाम त्वचेवर, श्रवनसंस्थेवर, पचनसंस्थेवर होऊन त्वचा, दमा किंवा अस्थमा, सर्दी, कोरडा खोकला, आम्लपित्त, डोकेदुखी, अंगदुखी इ. लक्षणे दिसतात. या त्रासाच्या तपासण्या केल्या तर सर्व काही नॉर्मल येते. कारण माणसिक ताणाचा हा शारिरिक परिणाम असतो. याचा अर्थ एवढाच आहे की कोरोना या विषाणूला हरवण्यासाठी आपण आपल्या शरिरातील रोग प्रतिकारक शक्ती कमी होऊ देत कामा नये. आपल्याकडे आणि जगात अशी असंख्य उदाहरणे आहेत. जी जीवघेण्या आजारातून ही माणसं केवळ आत्मविश्वास, इच्छाशक्ती, योग्य काळाजी, योग्य उपचार आणि मानसिक संतुलन ठेवून अनेक पेशंट ठणठणीत बरे झाले आहेत. त्यासाठी मनाची प्रसन्नता, शरीराची व परिसराची स्वच्छता, व्यक्ती व्यक्तीमधील योग्य अंतर पाळण, बाहेर हिंडतांना मास्कचा नेहमी वापर, बाहेरून येताना साबणाने किंवा सॅनिटाइझरने हात धुणे, अंत्यत गरजेच आहे. यासाठी कोणत्याही शासकीय अनुदानाची गरज नाही. ज्याची गरज आहे ते देण्यासाठी सरकार तयार आहे.

कोरोना विषाणुचे संकट हे साधे संकट नसून दुसऱ्या महायुद्धानंतरचे जगासमोरचे एवढे मोठे महाकाय संकट आहे की जीवन जगत असतांना जीवनामध्ये जन्म, शिक्षण, परीक्षा, व्यवसाय, नोकरी, साखरपुडा, लग्न, मृत्यूनंतर घेणारा

अंतीमसंस्कार, उत्तरकार्य या अत्यावश्यक बाबींवर या कोरोनाने मुस्क्या आवळल्या आहेत. या रोगाला अजून पावरफुल औषध शोधण्यासाठी अनेक संशोधकांनी व ख्यातनाम डॉक्टरांनी प्रयत्न करायलाच हवेत. शासन या बाबतीत प्रचंड मेहनत घेत आहे. तुर्कास रोग होऊ नये, म्हणून प्रतिबंधक उपाय योजने एवढाच आता सर्वासमोर पर्याय आहे. म्हणून लॉकडाउन नियोजन पूर्वक धोरण अवलंबून हा रोग आटोक्यात आणण्याचा भारतसंकट सर्व देशात प्रयत्न चालूच आहे. अर्थव्यवस्थेवर प्रचंड ताण आलेला असल्या तरी राज्यकर्ते तनमन धनापासून मजुर वर्ग, कष्टकरी वर्ग, गोरगरीब जनता, शेतकरी वर्ग यांच्यासाठी धान्याच्या स्वरूपात, पैश्यांच्या स्वरूपात वेळोवेळी मदत करित आहे. काही दाते लोक सढळ हाताने शासनाला दानाच्या स्वरूपात मदत करित आहेत. लॉकडाउन मुळे येणाऱ्या सक्तीचा रिकामेपणामुळे व एकटेपणामुळे कौटुंबिक सामाजिक मानसिक आरोग्याच्या समस्या निर्माण होऊ लागल्या आहेत. विद्यार्थ्यांना शिक्षण हक्कापासून वंचित राहावे लागत आहे. दूर शिक्षण माहिती तंत्रज्ञानाचा वापर यूट्यूब, हॅंग आउट मल्टीमीडिया, मोबाईल फोन, दूरदर्शन, लायब्ररी इ. माध्यमांतून विविध देशांप्रमाणे भारताने देखील तातडीने मुलांचे शिक्षण खंडित होऊ नये म्हणून वरील प्रकारचे उपक्रम सुरु केले आहेत. पण तरीही एक समस्या आहे मी म्हणजे अत्यंत गरीब आदिवासी पट्यातील महाविद्यालयीन काही अती सामान्य विद्यार्थी असे आहेत की त्यांच्या घरात आजही लाईट नसून रॉकेलचा दीवा आहे. स्मार्ट फोन सोडाच पण साधा मोबाईल ही नाही. अशा विद्यार्थ्यांचे काय? या समस्येकडे शासनाने लक्ष देण्याची गरज आहे.

एकुणच या समस्या लक्षात घेत असताना आजपर्यंत ५४/५५ दिवसांच्या लॉकडाउनच्या काळात ज्यांच्या कृपेमुळे भारतीय जनता आजपर्यंत जी काही तगली आहे, ते म्हणजे भारत देशातील मा. ए. पी. आय. साहेब तसेच मा. पी. आय साहेब, पोलीसबंधू पोलीसभगिनी, पोलीस राईटर बंधू, क्लर्क, पोलीस गाडीचे पोलीस ड्रायव्हर. या सर्वांच्या या सर्व गोष्टी सर्वसामान्य नागरीकाला किरकोळ वाटत असल्या तरी सुशिक्षित, संस्कारशील माणसांना पोलीस बंधुचे ध्येय, कर्तव्य, निष्ठा अत्यंत श्रेष्ठ आहे. हे लक्षात आले आहे. तीच गोष्ट सरकारी डॉक्टर, सरकारी दवाखान्यातील सर्व नर्सस, कंपाऊंडर, खाजगी डॉक्टरबंधू, खाजगी दवाखान्यातील नर्सस, तसेच घरोघरी जावून सर्वे करणारे आरोग्य कर्मचारी देखील तितक्याच हिमतीने व ताकदीने या कोरोनारूपी यमाच्या यात्रेत निष्ठेने जीव सांभाळून भारतवासीयांची 'कोरोना' ची लागण झालेल्यांची काळजीपूर्वक सेवा करित आहेत. म्हणून तमाम भारतातील सरकारी डॉक्टर, खाजगी डॉक्टर-नर्स, सफाई कामगार यांचाही पोलीस विभागा इतकाच बरोबरीचा हिस्सा

आहे. या लॉकडाउनमुळे अनेक गोष्टी लॉक झाल्याने किती तरी शेतकऱ्यांच्या द्राक्ष बागा द्राक्ष असुनही विक्री बंदमुळे साश्रुनयनांनी द्राक्ष बागांची कत्तल होताना डोळे बंद करावेत की काय? असे वाटून येते. अनेकांनी पोल्ट्रीमधील कॉबड्यांना योग्य भाव नसल्याने व चिकन खाल्याने कोरोना होतो या चुकीच्या अफेवेमुळे कॉबड्यांना रानात बेवारस मोकळे सोडल्याचे दृश्य टी.व्ही. वर दिसून आले. कॉबड्यांना खाद्य नसल्याने कॉबड्याच एकमेकांना चावतांनाचे दृश्य टी.व्ही. वर दिसून आले. एकीकडे ब्रिटनचे पंतप्रधान मा. बोरीस जॉन्सन आ. सी. यू. मध्ये कोरोनाग्रस्त म्हणून त्यांच्यावर इलाज सुरु आहे.

मुंबईत २६ नर्स व ३ डॉक्टरांनाही कोरोनाची लागण झालेल्या टी. व्ही. वरील बातम्यांनी लक्षात आले. अशा अत्यंत महाभयानक 'कोरोनारूपीयमा'चे तांडव सुरू असताना माझी एक भारतीय बंधू म्हणून तमाम भारतवासीयांना हात जोडून कळकळीची विनंती आहे की भारतातील तरूण-तरूणींचे ज्यांचे विवाह जुळालेली आहेत. त्यांनी नवरदेव-नवरी दोघीकडच्या लोकांनी आपापले विवाह शहाणे असाल तर. फक्त नवरदेव- नवरी दोघीकडचे मामा एखाद्या शेतात किंवा एखाद्या रुममध्ये किंवा छोट्याश्या मंदीरात किंवा आपापल्या घरीच ७-८ लोकांच्या (मास्क तसेच सोशल डिस्टन्सिंगची शासन नियमावली तसेच शासन परवानगीने) साक्षीने आपापले विवाह नो डिजे, नो घोडा, नो मंडप, नो आहेर, नो बस्ता, नो व-हाडी, नो गर्दी, नो पंगत, नो जेवनावळ अशा पद्धतीने वधु-वरांना लग्न लावून मोकळे करावे. कारण १७ मेला लॉकडाउन संपताच भारत रोगमुक्त झाला असा गोड गैरसमज करून घेवून लग्नाची जत्रा गोळा करून कोरोनाचा खत्राची लागण करून घेवू नये. कारण लोकांची गर्दी वाढवून कोरोनाची लागण झालीच तर वधु व वर पक्षाकडील आई - वडील हेच जबाबदार राहतील. कारण लग्नाच्या गर्दीमध्ये विविध गावाकडील लोक येतील कोणाला कोरोना झाला असेल याचा अंदाज आपल्याला येणार नाही. नातेवाईक, सगे-सोयरे, जावाई, भाचे जावाई यांचा अपमान आपल्याला करता येणार नाही. स्वयंपाक करणारा आचारीपासून तर वाढणारे वाढपी हे निकोप असतीलच याची खात्री कोणीच देवू शकत नाही. बॅण्डवाले, डी. जे. वाले हे देखील कोरोनाग्रस्त असू शकतात हे केव्हाही गृहीत धरून चालले त्यालाच सुज्ञ नागरीकाच्या पंक्तीत बसावायला हवे. म्हणून भारतभरच्या वडीलधान्या माझी मंडळीस कळकळीची विनंती की, आपण जर शासन-प्रशासनाच्या नियमावलीत राहून 'नववधू-नवरदेव' यांचे अत्यंत खाजगी स्वरूपात ७-८ मंडळीच्या साक्षीने सोशील डिस्टन्सिंगची, मास्क इ. नियमांचे पालन करून लग्न करून मोकळे व्हावे. बिचाऱ्या वधु-वरांना विनाकारण श्रीमंतीचा

बडेजाव दाखविण्यात तिष्ठत ठेवू नये. गर्दी वाढवून किंवा थाटामाटात लग्न करून कोरोनाची लागण झाली तर वधू-वर पक्षाकडील दोघांचे आई-वडील हेच जबाबदार राहतील. अन्यथा शासन नियमावलीत जी शिक्षा असेल ती अशा शुभवेळी आपणास भोगावी लागेल हे लक्षात ठेवावे. म्हणुन मी आपल्याला समाजाचा शत्रु न ठरता देश हिताच्या दृष्टीने तमाम भारतवासीयांना हात जोडून नम्रपणे कळकळीची विनंती करतो. की १७ मेनंतर जरी लॉकडाउन संपलातरी 'लॉकडाउन नंतर लग्ने ठरू नयेत विघ्ने' असा सार्वजनिक हिताचा इशारा तमाम भारतीयांना देतो व माझ्या लेखणीला पुर्णविराम देतो.

निष्कर्ष -

- लॉकडाउनच्या काळातील लोकांच्या मनातील कोरोना बद्दलची नकारात्मक भावना निकाली लावून त्यांची मने सकारात्मक झाली.
- लॉकडाउनच्या काळात व्यसनी माणसांची व्यसने सुटली.
- मोटरसायकली, चार चाकी वाहणे, बसेस इ. वाहणे बंद असल्यामुळे प्रदूषणमुक्त स्वच्छ वातावरण निर्माण झाले.
- चायनीज पदार्थ, फ्रास्ट फूड हे लॉकडाउनच्या काळात मिळत नसल्याने खाणे बंद होउन आरोग्य सद्दृढझाले.
- भारत देश सुखी ठेवण्यासाठी अगोदर डॉक्टर नर्सेस पोलीस विभागातील सर्व कर्मचारी; सफाई कामगार आरोग्य कर्मचारी हे देवासमान ठरले.

- लॉकडाउनच्या काळात अन्न, वस्त्र, निवारा यांचे खर्चाचे गरजा आहेत.
- लॉकडाउनच्या काळात लोकांना काटकसरीतही उत्कृष्ट जीवन जगता आले.
- ग्रामीण आदिवासी पट्ट्यातील विद्यार्थ्यांची आर्थिक परिस्थिती अत्यंत हलाखीची असल्यास्तव त्यांच्याकडे साधा मोबाईल देखील नसल्याने ई लर्निंग शिक्षणापासून बरेच विद्यार्थी वंचित राहिले.
- परिसराची स्वच्छता, शरीराची स्वच्छता, शारिरीक अंतर, मास्क लावणे, साबणाने हात धुणे या बाबी निकोप आरोग्यासाठी अत्यंत महत्त्वाच्या ठरल्या.
- सधन परिवारातील व श्रीमंत कुटुंबातील माणसांनी आपल्या मुला-मुलींची लग्ने नो हुंडा, नो बस्ता, नो मंडप, नो डीजे, नो गर्दी, नो जेवणावळ या खर्चीक बाबींना फाटा दिला. फक्त १०/१५ लोकांच्या साक्षीने अत्यंत साध्या पद्धतीने कमी खर्चात लग्ने केली. जेने करुन लॉकडाउन नंतर सुद्धा लग्ने ठरू नयेत विघ्ने.

संदर्भ ग्रंथ :

- १) मोबाईल व्हॉट्सप मेसेज वरील माहितीचा आधार.
- २) टी. व्ही. वरील बातम्या व घटनांचा आधार.
- ३) गुगलचा आधार.

कोरोनाला आळा,संपर्क टाळा

कोरोना – साथीच्या रोगामुळे टाळेबंदीचा (lock down) वर्तमान व भविष्यातील प्रभाव –समाजशास्त्रीय अध्ययन

डॉ. सुनिल अजाबराव पाटील

समाजशास्त्र विभाग प्रमुख,

उत्तमराव पाटील कला व विज्ञान महाविद्यालय, दहिवेल ता. साक्री जि. धुळे

प्रस्तावना –

कोरोना वायरस म्हणजे कोविड -१९ या साथीच्या आजारामुळे आज संपुर्ण देश व जग या महामारीच्या संकटात ओढले गेले आहे. आणि आज जगातील प्रत्येक समाजाला आंतर्मुख व्हावे लागते आहे. काही देशात मृत्यूचे तांडव सुरु आहे. तर काही देशांत संसर्ग व्हायला व वाढायला सुरुवात झाली आहे. आणि टप्याटप्याने यात वाढ होत आहे. परंतु हे संकट आटोक्यात आलेले नाही. कळत न कळत मानवाने हे संकट ओढवून घेतलेले आहे. आणि या महामारीच्या संकटात विकसित, विकसनशिल व मागासलेले अशा सर्वच वर्गातल्या देशांना याचा फटका बसला आहे. म्हणजे कोरोना संसर्गाने कोणत्याही देशावर भेदभाव केलेला नाही. या संसर्गात येणारे आणि ग्रस्त होणाऱ्या लांकांची संख्या दिवसेंदिवस लाखोची उड्डाणे घेत आहे. या साथीच्या पसरणाऱ्या रोगामुळे आर्थिक, सामाजिक, राजकीय व्यवस्था ढवळून निघाली आहे.

चिनमधील वुहान शहरापासून सुरु झालेला कोरोनाचा संसर्ग वाढत वाढत संपुर्ण जगात काही दिवसातच पसरला याचे मुख्य कारण या रोगाबाबत जनजागृती करण्यात काही देश कमी पडले तर काही देश आर्थिक सत्तेच्या मस्तीत राहिले, तर काही देशात निष्काळजीपणा व याकडे केलेले दुर्लक्ष यामुळे आज जगातील प्रत्येक देशासमोर व सर्व मानवी समाजासमोर एकच चिंता आहे ती म्हणजे या महामारीपासून वाचायचे कसे? आणि या संसर्गाला थांबवायचे कसे? आणि यातूनच वैद्यकीय उपचारांची पराकाष्ठा सुरु झाली. वैद्यकीय उपचार हे बाधित लोकांसाठी आहेत परंतु हे संकट दुहेरी आहे. म्हणजे इतर लोकांना संसर्ग होऊ नये म्हणून दुसरी यंत्रणा सुरु करणे आवश्यक आहे. त्यात पहिला पर्याय दिसला तो लॉकडाऊन (टाळेबंदी). आणि प्रत्येक देशांनी लॉकडाऊन स्विकारला म्हणजेच मानवाने घरातच राहणे आणि घरात राहूनच काम करावे "Stay Home, and work to Home".

आज प्रत्येक देशात विविध टप्पे करून लॉक डाऊन राबविला जात आहे. काही देशात तर आर्थिक आणिबाणी जाहीर केली. आर्थिक चक्र पुर्णपणे थांबले. अमेरिकेसारख्या आर्थिक महासत्ता असणाऱ्या देशात, इटली सारख्या वैद्यकीय प्रभाव असणाऱ्या देशात, युरोपिय देशात या महामारीने थैमान

घालविणे सुरु केले. मी-मी म्हणणारे साम्राज्यावादी देश या महामारीपुढे हतबल झालेत आणि आपल्या भारताचा विचार केला तर आज जवळपास ५० हजारापेक्षा जास्त बाधीतांची संख्या असून जवळपास ६ हजारापेक्षा जास्त मृत्यू झालेत. दिवसेंदिवस ही आकडेवारी धकधक वाढवणारी आहे. आपल्या देशातल्या नेतृत्वानेही लॉकडाऊन स्विकारला आज लॉकडाऊनचा तिसरा टप्पा सुरु आहे. जवळपास दिड महिण्यापासून घरात कोंडून रहावे लागते आहे. तरीही आपल्या समाजातील शिक्षित वर्ग शासनाने घोषित केलेल्या टाळेबंदिला (लॉकडाऊनला) हरताळ फासतो आहे. तर कुठे डॉक्टर, परीचारीका, (नर्स), पोलीस यंत्रणा यांच्यावर हल्ले होतांना पहावयास मिळतात, ते लोक ही स्वतःचा जिव धोक्यात घालून वैयक्तिक सुरक्षेसाठी त्यांनाही संघर्ष करावा लागतो आहे. हे चित्र एकूणच भारतीय समाजाला शोभणारे नाही. या रोगापासून बचावाचा मुख्य मुद्दा म्हणजे- स्वतःला घरात बंद करून घेणे व स्वतःचेही आणि इतरांचेही प्राण वाचविणे.

सद्यस्थितीत या महामारीमुळे साथीच्या रोगामुळे जगाचा इतिहास बदलताना पाहात आहे. लॉकडाऊनमुळे संपुर्ण जगात व देशात एक परिवर्तन होतांना दिसते आहे. या बदलत्या प्रवाहाचा संपुर्ण समाजावर, कुटुंबावर, अर्थ व्यवस्थेवर काय परिणाम होणार आहेत? व त्यातून आपण काय शिकायचे आहे? त्यातून समाजाला नवीन काय शिकता येईल? स्वतः मध्ये कसा बदल करता येईल? याचा विचार करणे आवश्यक आहे. या उद्देशाने अभ्यासकाने विचार करावयाचे ठरविले म्हणून कोरोना साथीच्या रोगामुळे टाळेबंदीचा (लॉकडाऊनचा) सद्यस्थितीत व भविष्यातील प्रभाव-एक समाजशास्त्रीय अध्ययन हा संशोधनाचा विषय निवडला आहे.

संशोधनाचे उद्देश –

- १) कोविड-१९ चा वाढता प्रारंभपरिणामांची जाणीव किंवा जागृतता लक्षात घेणे.
- २) कोविड-१९ च्या प्रसाराला प्रतिबंध घालण्यासाठी सूचविलेल्या उपायांचा अभ्यास करणे.
- ३) एकूणच जगातील मानवी जिवन पद्धतीत होणाऱ्या बदलाचा अभ्यास करणे.

संशोधनाचे गृहीतके -

- १) कोवीड -१९ साथीचा प्रसार गतीने होत आहे.
- २) कोरोना साथीच्या रोगाचा लॉकडाऊन मुळे व्यक्तीगत सामाजिक, आर्थिक, पर्यावरणात्मक घटकांवर प्रभाव पडतो आहे.
- ३) कोरोना साथीच्या महामारीचा प्रभावामुळे मानवी जिवन पद्धतीत बदल होत आहे.

संशोधन पद्धती -

प्रस्तुत अभ्यास लेखासाठी अभ्यासकाने प्राथमिक व दुय्यम स्रोतांचा आधार घेऊन तथ्ये संकलित केली आहेत. प्राथमिक स्रोतांमध्ये निरीक्षण व मुलाखत तथ्यांचा अवलंब केला असून दुय्यम स्रोतात विविध वेबसाईट वरील आकडेवारी, विश्लेषण, वर्तमान पत्रातील लेख, न्युज चॅनल वरील वर्तालय यांच्या आधारे तथ्ये संकलीत केली असून वर्णनात्मक संशोधन पद्धतीच्या आधारे तथ्यांचे विश्लेषण केलेले आहे.

विश्लेषण -

प्रस्तुत संशोधन लेखात कोरोना वायरस व त्या संबंधीचा वाढता प्रसार आणि त्याच्याशी निगडित एक नवीन इतिहास आज लिहीला जात आहे. आणि सध्याची पिढी या महामारीमुळे बदलणारा जगाचा इतिहास डोळ्यांनी पाहत आहे. आणि हे सुध्दा खरे आहे की, त्या पिढीने असा संबंध देश लॉकडाऊन व सर्वत्र बंद व सोसीयल डिस्टेंसिंग (शारीरिक अंतर) याचा पहिल्यांदाच अनुभव होत आहे. या सध्याच्या पिढीने कोरोना वायरस चा प्रसारचा विचित्र परिस्थितीत एक प्रकारे समज्यसांची भुमिका घेतली आहे हे सुध्दा दिसते आहे. आणि ही भुमिका खरोखर वाखानन्याजोगी आहे. जवळपास दिड महिन्यांच्या टाळेबंदीने देशात व जगातील सामाजिक संरचनेत परिवर्तन होतांना दिसते आहे.

लॉकडाऊनच्या काळात भारतातील १२५ कोटी लोकसंख्या आणि जगाची ३०% जनता पूर्णपणे थांबुन आहे. त्यांनी बंद स्विकारला आहे. आज जगात ३५ लाखांपेक्षा जास्त लोकांना या रोगाचा संसर्ग झालेला आहे. तर २.५० लाखांपेक्षा जास्त लोकांना जिव गमवावा लागला आहे. या महामारीला थोपवण्यासाठी सार्वत्रिक बंद करण्यात आला आहे. या रोगावर नियंत्रण मिळविण्यासाठी शारीरिक अंतर राखण्याचा प्रयत्न करित आहे. जनता घरात राहुन एकमेकांना साथ देऊन या नव्या प्रसंगाला व समस्यांना ओळखून भविष्यातील बदलाचा अनुभव घेत आहे. आणि चुपचाप हे सहन करित आहे.

लॉकडाऊनचा (टाळेबंदीचा) प्रभावामुळे कुटुंबातील संबंधांची व्यवस्था बदलत आहे. आज सर्वच लोक घरात शिजवलेले व तयार केले अन्न ग्रहण करण्याचे प्रमाण वाढले. त्यामुळे योग्य आहार, औषधी व स्वदेशी वैद्यकिय ईलाज

यांचे महत्व व चलन वाढले आहे. त्याच बरोबर दैनंदिन स्वच्छतेचे महत्व वाढले तसेच आपल्या परीजणांचा सहवास, शेजारी-पाजारी यांचा परीचय दृढ होत आहे. शेजार संस्कृतीचा परिचय प्रामुख्याने मोठ्या शहरात धावपळीच्या जिवनात शेजार संस्कृती विसरत चालला होता. वेळ नाही म्हणून माणुस माणसापासून भावनिक व मानसिक व शारीरिक अंतरावर होता. आता टाळेबंदीच्या काळात आपल्या आजु बाजुच्यांना समजून घेतांना दिसत आहे. खऱ्या खऱ्या कौटुंबिक जिवनाचा आस्वाद आज सार्वत्रिक बंदमुळे अनुभवतो आहे.

शिक्षण संस्था, शाळा, महाविद्यालय बंद आहेत परंतु शैक्षणिक नुकसान टाळण्यासाठी सरकार सोबत बहुतांश शैक्षणिक संस्थांनी, खाजगी शिकवणी वर्गांनी ऑनलाईन वर्ग सुरु करून दिलेले. त्यात गरीब व दुरवरच्या दुर्गम भागातील विद्यार्थ्यांना मोबाईल व इंटरनेट संबंधीत समस्या निर्माण होत आहेत. व त्यावर ही आज उपाय शोधले जात आहेत. एकंदरीत कोरोना साथीच्या रोगामुळे डिजिटल काम व नवीन ऑनलाईन शिक्षणाचा हा नवीन विचार प्रवाह सुरु झाला आहे. त्यातुन एक जाणवते की भविष्यात दैनंदिन कामकाजात डिजिटल तंत्रज्ञानाचा वापर अधिक वाढणे अपरिहार्य आहे. आणि यामुळे काही वर्षापूर्वी विद्वानांनी म्हटले होते की संस्कृतीच्या सिमारेषा समाप्त होत आहेत, समाजा-समाजातील अंतर कमी होत आहे आणि जगाचे एका मोठ्या खेड्यात रुपांतर होत आहे. हे आज वास्तवात येताना दिसते आहे. याला कोरोना महामारी सारख्या रोग कारण बनेल हे मात्र माहीत नव्हते.

आज ज्याप्रमाणे कोरोना वायरसने व्यापक स्वरूप धारण केले आहे त्यामुळे संपुर्ण विश्वात निश्चित परिवर्तन होणार या मागे कटू सत्य हे आहे की, आज जगात जे जिवशास्त्रीय शोध लावले जात आहेत. त्याचे प्रतिकूल परिणाम म्हणुन आज अखिल मानव जातीवर संकटाचे ढग निर्माण झालेले दिसतात. त्यामुळे संपुर्ण जगातील प्रत्येक देशाला आज अशा प्रकारच्या आपत्तीमुळे नवीन तंत्र शोधाचे लागेल वा नवीन संशोधनाची गरज निर्माण झाली आहे.

चिनमधील वुहान प्रांतातुन निर्माण झालेला कोरोना वायरस तीन महिन्यात भारतात पोहोचला तसेच संपुर्ण जगाला त्याने कवेत घेतले. भारतात आल्यानंतर देशाची जिवनपटरी थांबल्या सारखे झाले. असे असुनही लोकशाही व्यवस्थेवर विश्वास आणि देशाच्या नेतृत्वावर विश्वास ठेऊन संपुर्ण देश लॉकडाऊन मध्ये राहायला तयार झाला नव्हे तर लॉकडाऊनचे नियमही पाळले. जसे-घरात राहा, सुरक्षित अंतर ठेवा, चेहऱ्यावर मास्क लावा, सोशल डिस्टेंसिंगचे पालन करा, गरजांवर नियंत्रण ठेवा या प्रकारे भारताने लॉकडाऊन काळात जे प्रयत्न केले त्याचे संपुर्ण जगाने कौतुकही केले. त्याचवेळेस

दुसरीकडे बलशाली अमेरीका, वैद्यकीय क्षेत्रात प्रबळ व आधुनिक मानला जाणारा इटली, स्पेन, फ्रान्स, सारखे देश आपले स्वच्छंद राहणीमान, स्वतंत्रता, व विकसितपणाच्या गर्वामुळे कोरोनापुढे हतबल झालेत. त्यांच्या अर्थव्यवस्था खिळखिळ्या झाल्यात, त्या देशात मरणाचे आकडे रोजचे वाढतायेत त्यामुळे कोरोनाच्या नंतर म्हणजे कोरोना उत्तरार्धात आर्थिक, शैक्षणिक क्षेत्रात व रोजच्या जिवनात खूप वेगाने बदल होणार आहेत परिणामी त्या-त्या देशांना आपली अर्थव्यवस्था पूर्वपदावर आणण्यासाठी कडक आर्थिक निर्णय घ्यावे लागतील इतर देशांशी संबंध प्रस्थापित करून नवीन शिक्षणाचा विस्तार करावा लागेल तसेच 'वर्क फ्राम होम' ही संस्कृती स्विकारावी लागेल, तसेच रोजची गर्दी टाळून शारीरिक अंतर ठेवावे लागेल, स्वच्छता हे जिवनाचे एक महत्वाचे अंग आहे हे स्विकारावे लागेल.

आपल्या भारतात केंद्रीय मानव संसाधन मंत्री श्री. रमेश पोखरीयाल यांनी तर नवीन शैक्षणिक धोरणावर बदल करण्यासाठी सुरवात केली आहे. त्यांनी शिक्षणाचे कार्य डिजिटल करून विद्यार्थ्यांपर्यंत पोहचवण्यासाठी ई-शिक्षण प्लॅट फार्म, ई-ग्रंथालय तसेच विविध शैक्षणिक चॅनेल्स तयार केले आहेत व मार्च अखेरीस पर्यंत जवळपास (दिड कोटी) १ कोटी ५० लाख विद्यार्थ्यांना या कार्यक्रमांशी जोडून घेतले. मानव संसाधन मंत्रालयाने स्वयंमंच मंच तयार करून ५७४ अभ्यासक्रम आणि २६ लाख विद्यार्थी त्यात प्रवेशित केलेत. तसेच ऑडीओ व व्हिडीओ व व्हर्चुअल वर्ग विद्यार्थी व शिक्षकांसाठी उपयोगी ठरत आहेत. त्यामुळे लाखो व्यक्तींना वर्क फ्रॉम होम मुळे आता घरातच कार्यालय बनले आहेत.

येणाऱ्या काळात भलेच टाळेबंदी (lockdown) नसेलही तरी सुदृढ दैनंदिन जिवनात शारीरिक अंतर (physical distancing) ठेऊन चालावे लागेल, शिक्षण क्षेत्रात ई-शिक्षण (E-Learning) स्विकारावे लागेल. तसेच डिजिटल संस्कृतीचा स्विकार करावा लागेल. नवीन आचार विचार, नवीन कार्य संस्कृतीचा अवलंब करावा लागेल. म्हणजेच कोरोनाच्या महामारीनंतर किंवा या संसर्गाचे निर्मुलन झाल्यानंतर एक नवीन जीवन पध्दतीचा परिचय होणार असून या परिवर्तनाच्या प्रक्रियेत घरगुती जिवन पद्धतीत, खान-पान, राहणीमान व सामाजिक संबंध शिकविण्यासाठी नवीन जिवन शैलीत स्वतःला सामावून घ्यावे लागेल.

कोरोनाच्या संसर्गामुळे असेही लक्षात आले आहे की, आत्महत्या, रस्ते अपघात, हत्या, गुन्हेगारी, शारीरिक आजार, यातु खूपच मोठी घट झाली आहे. कौटुंबिक सौहार्दाचे प्रमाण वाढले आहे. कुटुंबातील सदस्य एकमेकांना ऑफीस च्या काळात मदत करीत आहे, त्याचे प्रमाण एका सर्वे नुसार ५७% आहे. ९७% लोक लॉकडाऊन काळात कुटुंबासोबत

राहत आहेत, ९४% लोक एकत्र जेवण करतात त्यामुळे कुटुंबात मोकळी चर्चा होते, ९४% युवक कुटुंबात आई-वडीलांना घराच्या कामात मदत करतात. ९०% लोक लॉकडाऊनच्या काळात कुटुंबासमवेत वेळ घालवत आहेत. त्यामुळे कुटुंबातील ताण-तणाव व मतभेद कमी झाले आहेत. (संदर्भ-२३ एप्रिल ते २६ एप्रिल दरम्यान काळातील २५० निवेदकांचा माहितीच्या आधारे)

पर्यावरणाच्या दृष्टीने विचार केला तर नदी, नाले स्वच्छ झाले आहेत, पाणी प्रदुषण, ध्वनी प्रदुषण, भुमी प्रदुषण कमी झाले आहे. एकंदरीत पर्यावरणीय प्रदुषण कमी होऊन पर्यावरणातील ओझोन थराला छिद्रे पडले होते. ओझोन थर विरळ झाल्यामुळे अति उष्णतेची समस्या निर्माण झाली होती परंतु लॉकडाऊन काळात ओझोनचा थर पूर्ववत झाला आहे. म्हणजे मनुष्य प्राणी, मातृभूमीच्या रक्षणात कमी पडला होता. परंतु निसर्गाने स्वतःचे संरक्षण व मानवाचेही संरक्षण केले. हेच कारण आहे की आता निसर्ग सापेक्ष आरोग्य आणि जिवनाचे महत्व लोकांना जाणवू लागले आहे. काही विचारवंतांच्या मते असाही विचार पुढे येत आहे की, प्रत्येक देशात जाणीवपूर्वक वर्षातुन एक महिना टाळेबंदी ठेवली तर वरील सर्व सकारात्मक बदल जे मानवासाठी कल्याणकारी आहेत ते दिसून येतील.

सारांश -

एकंदरीत कोरोना साथीच्या रोगामुळे आज जगात नव्या बदलाची नांदी सुरु झाली आहे. जगात सर्व पातळीवर बदलण्यासाठी मानसिक, शारीरिक, व आर्थिक क्षेत्रात स्वतःला तयार करावे लागले तरच बदलाच्या पर्यावरणाशी समायोजन साधता येईल. आधुनिक जिवन पद्धती, ई-शिक्षण, डिजिटल कार्यभार, नवीन आचार विचार स्विकारावे लागतील. या बदलत्या जिवन शैलीत स्वतःला सांभाळून घ्यावे लागेल अन्यथा तो मागे पडेल व सांस्कृतिक पाश्चायन (cultural lag) जास्त प्रमाणात निर्माण होईल त्यामुळे पुन्हा समाजातील वैचारीक व भौतिक संस्कृतीतील अंतर वाढेल. त्यामुळे समाजात असमतोलाची परिस्थिती निर्माण होण्याचा धोका निर्माण होवू शकतो.

म्हणून चला नव्या आचार-विचारांचा, वर्तनाचा आपण वाहक बनू या! व नवीन समाज निर्माण करू या!! व एकजुटीने कारोना रुपी राक्षसाला हरवू या!।

संदर्भ ग्रंथ :

- १) नमुना सर्वेक्षणाचा आधार.
- २) कोरोना विकीपिडीया.
- ३) विविध संकतस्थळे
- ४) वर्तनामपत्र व बातमीपत्र.

कोव्हीड-१९ साथरोगासंबंधी टाळेबंदीचा परिणाम : सद्यस्थिती व भविष्यकाळ

डॉ. सतीश मस्के

मराठी विभागप्रमुख,

कर्म. आ. मा. पाटील कला, वाणिज्य व कै.अण्णासाहेब एन.के.पाटील विज्ञान वरिष्ठ महाविद्यालय,
पिंपळनेर ता. साक्री जि धुळे

‘कोव्हीड-१९’ कोरोना व्हायरस या साथरोगाच्या विषाणूने सर्व जगाला वेढले आहे. थैमान घातले आहे. संपूर्ण जग या समस्यापुढे हतबल आणि भयभीत झाले आहे. त्यामुळे भारतात अनेक दिवसांपासून टाळेबंदी (लॉकडाऊन) करावी लागली आहे. या टाळेबंदीचे परिणाम मानवी जीवनाला अस्वस्थ करणारे जीवघेणे आहे. बेचैन करणारे आहेत. अमेरिका, जपान, जर्मनी, इटली, स्पेन, ब्राझील, चीन यासारखे बलाढ्य देशांची दैना उडाली आहे. त्यातल्या त्यात पडत असलेल्या माणसांच्या मृत्युमुळे फार हादरून गेले आहेत. हातबल झाले आहेत. ही परिस्थिती नष्ट करण्यासाठी तिचा अटकाव करण्यासाठी सर्व स्थरातील पातळीवरून प्रयत्न चालू आहेत; परंतु आजपावेतो कोणत्याही देशाने त्यावर अजून तरी औषध शोधून काढले नसल्यामुळे आज घडीला कोरोनाचे आव्हान महाभयंकर जगासमोर उभे ठाकले आहे. शासन, डॉक्टर, नर्स, पोलिस, सफाई कामगार हे जीव धोक्यात घालून कोरोनाच्या लढ्यात कार्य करित आहेत. कोरोना व्हायरसपासून सगळ्यांना वाचवणे त्याचबरोबर ज्यांना ज्यांना ह्याची लागण झाली आहे अशांना वैद्यकीय सेवा पुरवून त्यांना कोरोनामुक्त करणे हेही महत्त्वाचे देशापुढे, जगापुढे आव्हान आहे.

अर्थव्यवस्थेवर परिणाम -

जगात जे विकसित देश आहेत/होते. राष्ट्र आहेत/होती. सद्यस्थितीत ती फार कोलमडून गेली आहेत. त्यांची अर्थव्यवस्था मोडकळीस येत आहे. आरोग्य आणि अर्थव्यवस्था याबाबतचे नियोजन कसे करायचे हे समजेनासे झाले आहे. संयुक्त राष्ट्र संघानेही जगाचे काय होईल याबाबत जगाची चिंता व्यक्त केली आहे. कोरोना व्हायरस इतका भयंकर असेल त्याचा फटका इतका जोरदार बसेल असे कोणत्याही देशाला वाटले नव्हते असे मत युनोने नोंदवले आहे. संपूर्ण जगालाच या कोरोना व्हायरसचा सामना करावा लागत आहे. कोरोना व्हायरसमुळे विविध प्रश्न समोर आले आहेत. मानवी जीवनाच्या मुलभूत गरजेचा प्रश्नही ऐरणीवर आला आहे. याविषयी डॉ. विजयकुमार वावळे म्हणतात की, या व्हायरसमुळे अर्थव्यवस्थेतील मजुरामध्ये दारिद्र्य आणि बेरोजगारीरूपी बसणारा फटका याला आपल्याकडे कोणतेही उत्तर असणार नाही. जगभरात तसेच भारतातही कोरोना

व्हायरसमुळे आरोग्य आणि अर्थव्यवस्था या दोन्ही क्षेत्राचा फज्जा उडाला आहे. वास्तविक पाहता अर्थव्यवस्थेचे हे मूलभूत प्रश्न आणि विशेषतः मजूर आणि त्यांना भेडसावणार्या विषमतेच्या झळा किमान कोरोनाच्या साथीमुळे का होईना जगाच्यासमोर आल्या.

आरोग्यावर परिणाम -

इटली, अमेरिका, स्पेन, ब्राझील अशा देशांमध्ये या कोरोना व्हायरसमुळे जीवित हानीही खूप मोठ्या प्रमाणावर झाली आहे. त्यामुळे माणसं भयभीत झाली आहेत. त्यावर अजूनही औषध शोधणे सुरू आहे. औषध निर्माण करणाऱ्यावर ते एक प्रकारचे चॅलेंज निर्माण झाले आहे. हा महाभयंकर प्रश्न सर्व जगासमोर निर्माण झाला आहे. आपण भारताचा विचार केला तर भारत देशातील संशोधन पाहिले तर ते फार उपयोगाचे आहे किंवा शासनही त्याकडे फार लक्ष देते आहे असे नाही त्यामुळे आपल्या देशाच्या विकासाच्या दृष्टीने आणि आरोग्याच्या दृष्टीने शासनानेही विचार करणे गरजेचे आहे. याविषयी डॉक्टर नागनाथ कोत्तापळे म्हणतात की, कुठल्याही शास्त्राचा विकास संशोधनातून होतो. दुःखाची गोष्ट अशी की, भारतामध्ये वैद्यकीय ज्ञानशाखेत होणारे संशोधन नगण्य आहे. आज ज्या ज्ञानाचा वापर होतो त्यात भारतीय तंत्रज्ञानी किती भर घातली असा प्रश्न केला तर उत्तर शून्य असेल. तसेच ज्या औषधांचा वापर होतो त्यातील बहुसंख्य औषधी बाहेरच्या तज्ञांनी शोधलेली आहे त. साधी मलेरियाची 'क्विनाइन' ही गोष्टीही पाच्छत्यांनी शोधलेली विकसित केलेली. म्हणजे वैद्यकशास्त्र असो औषधनिर्माण शास्त्र. भारतामध्ये त्या क्षेत्रात अगदीच संशोधन होते.

मानसिक अस्वस्थता -

सध्या लॉकडाऊनच्या काळात अत्यंत वाईट परिस्थिती अनुभवायला येत आहे. लॉकडाऊनच्या काळातील समाजाची, माणसाची परिस्थिती भयावह आहे. अत्यंत विषम आणि विदारक असे चित्र दिसते आहे. यामध्ये गृहकलह, घटस्फोट, एकाकीपणा, भीती, नाराजी, नैराश्य अशा गोष्टींचे प्रमाण वाढत आहे. दारिद्र्य वाढत आहे. त्याचबरोबर समाजातील ही अस्थिरता निर्माण झाली आहे. माणसांना खायला मिळत नाही. माणसं माणसापासून दूर जात आहेत.

एकमेकांना भेटता येत नाही. बोलता येत नाही. स्वार्थीपणा वाढला आहे. माणूस अंतर ठेवूनच वागतो आणि बोलतो आहे. सद्यस्थितीत मदत करणारी ही जातीय,धर्मीय राजकारण करत आहेत. मदत माणसा पर्यंत पोहोचत नाही. गावापर्यंत पोहोचण्यासाठी जीव मुठीत घेऊन पायी पायी चालण्याचा संघर्ष करावा लागत आहे. लहान मुलांची, स्त्रियांची, म्हातान्यांची फार आबाळ होत आहे. खायला मिळत नाही. शासनाने दिलेले ही त्यांच्यापर्यंत पोहोचत नाही. अशा अनेक गोष्टींना सामान्य माणसांना तोंड द्यावे लागत आहे. त्या समस्यांचे मानवी जीवनावर भयंकर परिणाम होत आहेत. हे विदारक दृश्य डोळ्याने पाहू न शकणारं आहे. याविषयी अच्युत गोडबोले म्हणतात की, समाजातली अस्थिरता, विषमता, प्रचंड स्पर्धा, व्यक्तिवाद, स्वार्थीपणा, आत्मकेंद्रीपणा, उंचावलेल्या महत्वाकांक्षा, त्याहीपेक्षा खूप कमी असलेल्या संधी, पैशाला व प्रतिष्ठेला आलेले प्रचंड महत्त्व, त्यासाठी चाललेली केविलवाणी धडपड आणि सतत इतरांशी केलेली तुलना ही या मनस्थितीला कारणीभूत आहे.ही कारणे दूर केल्याशिवाय माणसाची चिंता,भीती, एकाकीपणा आणि नैराश्य दूर होणार नाही.

शिक्षणावरील परिणाम -

कोरोनामुळे आणि लॉकडाऊनमुळे शिक्षण क्षेत्रावर ही प्रचंड मोठ्या प्रमाणावर परिणाम झाला आहे. अनेक विद्यार्थ्यांचे शैक्षणिक नुकसान झाले आहे. परीक्षा ठप्प झाल्या आहेत. जगात जवळजवळ १५० कोटी विद्यार्थ्यांवर या लोकांचा परिणाम झाला आहे. अनेक शाळा, कॉलेज बंद झाली आहेत. परीक्षाही घेण्यात आल्या नाहीत. त्या कधी होतील, कशा होतील, त्यामुळे विद्यार्थी, पालक, शिक्षक सगळेजणच हैराण आहेत. येणाऱ्या काळात शाळा-कॉलेजमध्ये न जाता इ बुक्स वाचने आणि इ लर्निंग अभ्यास करणे सुरुवात होईल. परंतु ग्रामीण भागातील विद्यार्थ्यांना जवळ सोयी सुविधा नसल्यामुळे त्याच बरोबर आदिवासी पाड्यावर इंटरनेट सुविधा नसल्यामुळे ग्रामीण भागापर्यंत ही पोहोचणे शक्य नाही. त्यावर अनेक बंधने येतील. लहान मुलांवर वाईट परिणाम होतील. भविष्यात इंटरनेटचे शिक्षण आले तर त्याचेही ही विद्यार्थ्यांच्या मनावर, डोळ्यावर परिणाम होतील.

बेकारी वाढण्यास परिणाम -

लॉकडाऊनच्या काळात कोरोनामुळे सर्वसामान्य माणसांचे जीवन फार विस्कळीत झाले आहे. अनेक हातांना काम नाही ,रोजगार नाही ,जगणे मुश्किल झाले आहे. कंपन्या बंद पडत आहेत. गावाकडे ही कामधंदे नाहीत. अनेकांच्या नोकऱ्या गेल्या आहेत. रोजगार मिळेनासा झाला आहे. शहरातील माणसे गावाकडे आली आहेत. त्यामुळे अनेकांच्या कुटुंबांमध्ये बेकारीचे प्रमाण वाढणार आहे.अमेरिकेत अनेकांच्या

नोकऱ्या गेले आहेत. जर्मनीने अनेकांना घरी बसावयास सांगितले. आपल्या भारतात ही अशाच प्रकारची परिस्थिती आहे.त्यामुळे उपजीविका कशी भागवावी हा प्रश्न भेडसावत आहे.

सामाजिक, सांस्कृतिक आयुष्यावर परिणाम -

कोरोनाच्या या भीतीमुळे फिजिकल डिस्टन्समुळे सामाजिक-सांस्कृतिक आयुष्यावर परिणाम होत आहे. महाविद्यालय कार्यक्रम,सामाजिक कार्यक्रम, सभा ,भाषण ,सिनेमा पाहणे, सिनेमा तयार करणे, नाटक बघायला जाणे ,खेळ खेळणे ,असे अनेक सामाजिक आणि सांस्कृतिक कार्यक्रम घेणे शक्य होणार नाहीत.त्यामुळे सामाजिक व सांस्कृतिक आयुष्यावरही त्याचा परिणाम होणार आहे.

शिक्षण आरोग्य वीज यांना प्राधान्य द्यायला हवे -

जगातील काही देशांच्या तुलनेत भारतात शिक्षण, आरोग्य व वीज अशा मूलभूत सुविधांवर फार कमी प्रमाणात खर्च केला जातो. भारत देशात भ्रष्टाचारावर खूप मोठ्या प्रमाणावर लक्ष दिले जाते. भ्रष्टाचार बळावत चालला आहे. हात कमी करू शिक्षण, आरोग्य याकडे लक्ष देणे गरजेचे आहे. कारण आपल्याकडील दवाखाने तेथील उपकरण, डॉक्टरांची संख्या या सगळ्या गोष्टी विदारक अशा आहेत. लोकसंख्येच्या मानाने ही सर्व साधने तोकडे आहेत. शिक्षणावरही म्हणावा तेवढा खर्च केला जात नाही. त्यामुळे संशोधनाकडे, वैज्ञानिकतेकडे अनेकजण वळताना दिसत नाहीत. मूलभूत सुविधांवर देशाचे भवितव्य अवलंबून आहे. हे शासनाने लक्षात घ्यायला हवे.शिक्षणाची व्यवस्था खालच्या वर्गापर्यंत जायला हवी जेणेकरून शासकीय पातळीवरून अर्थपुरवठा केला तर शिक्षणाच्या माध्यमातून त्यांची मने अधिक संशोधनाकडे वळतील .वैज्ञानिकता निर्माण होईल. विशाल होतील. विकसित होतील. जातीयता,धर्मांधतेच्या बाहेर पडून प्रगल्भ होतील. याविषयी डॉ. नागनाथ कोत्तापल्ले म्हणतात की, भारतीय माणूस अधिक दैववादी आहे. स्वतःला मोठे समजणारे काही शास्त्रज्ञ कधीकधी मंदिराच्या रांगेत उभे राहताना दिसतात. दैव आणि देव हे त्यांचे परवलीचे शब्द असतात. त्यामुळे बालपणापासून त्यांची जिज्ञासा मारून टाकले जाते.लहान मूल जेव्हा काही प्रश्न विचारते तेव्हा त्यांचे आई-वडील कधी त्यांच्या प्रश्नांचे उत्तर देत नाहीत. कधीकधी तेही देवाकडे, दैवाकडे बोट दाखवतात. अगदी बालपणापासून भारतीय पालक आपल्या मुलावर जातीचे,धर्माचे, अंधश्रद्धेचे,देव आणि दैवाचे संस्कार करतात मग त्यांच्या मनात प्रश्न कसे निर्माण होतील?(तसेच जाती बाहेरील धर्मा बाहेरील माणसाबद्दल प्रेम कसे वाढेल)

राजकीय, सामाजिक, धार्मिक वाद व मतमतांतरे -

'कोरोना'च्या काळात जनता सगळी भयभीत झाली

असतानाही राजकीय क्षेत्रात प्रचंड वाद आणि मतमतांतरे निर्माण होत आहेत. राजकारण केले जात आहे. सर्वसामान्यांना असुरक्षित वाटत आहे जीव वाचवणे त्यांना महत्त्वाचे असतानाही केंद्र आणि राज्य सरकार आपल्या पद्धतीने सामाजिक धार्मिक राजकारण करते आहे. जागतिक पातळीवर अमेरिका व चीन संबंध ताणले गेले आहेत. खरे तर जनतेचे सामान्य माणसांचे त्यांना काहीच देणेघेणे नाही असेच वाटायला लागत आहे. मदत करणे सोडून फक्त बोलघेवडेपणा सुरू आहे. डॉक्टर, नर्स, पोलीस, सफाई कामगार जीव धोक्यात घालून काम करत आहेत; परंतु त्यांना लागणारी साधन सामुग्री उपलब्ध करून देण्यापेक्षा गप्पा मारताना दिसतात. त्याचबरोबर केंद्र आणि राज्य सरकार आपल्या पद्धतीने सामाजिक, धार्मिक, जातीय राजकारण करताना दिसत आहे. काहीजण या संधीचा फायदा घेऊन अंधश्रद्धेला खतपाणी घालत आहेत तर कुणी पालघर प्रकरणावरून धर्मकारण करत आहेत. याविषयी डॉ. नितीन शिंदे व कृष्णा चांदगुडे म्हणतात की,

- १) कोरोना व्हायरसचा फायदा जसा जसा वाढत जात आहे तसा तसा वैदिक उपचार पद्धती सांगण्याचा जोर वाढत असल्याचे दिसून येते. गोमूत्राचा आणि गोबरचा पर्याय लगेच समोर येतो. गोमूत्रा मध्ये कोरोना विषाणू थोपविण्याची पद्धत आहे.
- २) काही प्रकारच्या अंधश्रद्धा आढळून येत गोमूत्र किंवा शेणापासून कोरोना बरा होतो. गाईच्या शेणाच्या गोव-यावर गाईचे तूप किंवा कापूर पेटविल्याने कोरोना दूर पळतो. विविध मंत्र म्हटल्याने कोरोना होत नाही.

अशा प्रकारचे अंधश्रद्धेचे मोठे पेव फुटलेले दिसते आहे. त्यामुळे अशा काळात राजकीय, सामाजिक, धार्मिक वाद बाजूला सारून सामान्यांना, गरिबांना, मजुरांना दिलासा देणे गरजेचे आहे.

देशादेशात व देशांतर्गत मतभेद -

आज घडीला अनेक देश कोरोना व्हायरसमुळे परेशान झाले आहेत. अनेक माणसे मृत्युमुखी पडली आहेत. शासकीय यंत्रणेवर ताण येत आहे. अनेक व्यवहार ठप्प झाली आहेत. देशाच्या अर्थव्यवस्थेची घडी पार विस्कटून जात आहे. डबघाईला येत आहे. कोरोना व्हायरस कोणी सोडला? चीनकडे सगळे प्रश्नार्थक नजरेने पाहू लागले आहेत. मदत करणाऱ्यांवरून, व्यवहारावरूनही एकमेकांचे संबंध ताणले जाऊ लागले आहेत. त्याचबरोबर भारतातही राज्या-राज्यात या टाळेबंदीच्या काळात सामाजिक, आर्थिक, धार्मिक, राजकीय अशा विविध कारणांवरून मतभेद होताना दिसत आहेत. आशा मतभेदामध्ये हे सामान्य माणूस मात्र भरडला जात आहे.

त्यांच्यापर्यंत योग्य अशा सुविधा पोहोचत नाहीत.

गरीब, मजूर, शेतकरी जीवनावर परिणाम -

अनेक देशात गरिबांची, मजुरांची संख्या भरपूर आहे. त्यांच्या जीवावर अनेक देश मोठी झाली विकसनशील झाली. कारखानदार, कंपनीवाले मोठी झाली. पण आज कोरोना व्हायरसमुळे याच गरीब, मजूर, शेतकरी यांची अवस्था केविलवाणी झाली आहे. त्यांच्याकडे मनावे तेवढे शासनाचे लक्ष नाही. हाताला काम नसल्यामुळे रोजच्या जगण्याचा प्रश्न निर्माण झाला आहे. अनेकांचे जीवन विस्कळीत आणि उध्वस्त झाले आहे. अनेक जण कुठे-कुठे अडकून पडले आहेत. त्यांना खायला मिळनासे झाले आहे. भुकेने मरत आहेत. त्यांच्या मनात कोरोना भीतीचे शासनाच्या भीतीचे वातावरण प्रचंड मोठ्या प्रमाणावर निर्माण झाले आहे. गावापर्यंत पोहोचायचे कसे अशा अनेक प्रश्न निर्माण झाले आहेत. औरंगाबादच्या करमाड रेल्वे रुळावर सोहळा जणांचे मृत्यू असे अनेक जीव रस्त्याने चालताना व खायला न मिळाल्यामुळे जाताहेत. याविषयी चित्रलेखामध्ये ज्ञानेश महाराव म्हणतात की, संपूर्ण उत्तर आणि मध्य भारतातील असंगठित क्षेत्रातील स्थलांतरित मजूर 'कोरोना' संसर्गाची भीती झुगारून आपल्या गावाकडे जाऊन मिळेल ते खाण्यासाठी मोठ-मोठी दिव्य करताना दिसले. दुधाच्या रिकाम्या टँकर मध्ये बसून काहीनी आपले घर गाठण्याचा प्रयत्न केला. मुंबईतून काहीजण मध्यप्रदेश, गुजरातकडे रस्त्याने पायी निघाले. काहीनी सायकलवर आपले गाव घालण्याचा प्रयत्न केला. सात आठ महिन्यांच्या गर्भवती बायका भर उन्हात चालताना दिसल्या. काही रस्त्यात बाळंत झाल्या. मुंबई ते वाशिम अंतर एक सात महिन्यांची गर्भवती मे महिन्याच्या ऊनात चालत निघाली.

असे गरीब मजुरांचे त्यांच्या लहान लहान मुलांचे, म्हाताऱ्या माणसांचे फार बेहाल झाले, होत आहेत. परंतु शासनाने मात्र त्यांची व्यवस्था लवकर केलेली नाही मात्र श्रीमंताना विमानाने आणले ही गरीब-श्रीमंत, जातीय धर्मीय विषमताही यावेळी पाहायला मिळाली.

शेतकरीही हवालदिल झाला आहे. त्याची अनेक कामे खोळंबून पडली आहेत. शेतात भाजीपाला, द्राक्षे, कर्लिंगड, टरबूज अशांचे खूप नुकसान झाले आहे. अशा शेतकऱ्यांचे व हातावर पोट असणाऱ्या मजुरांचे विदारक चित्र या टाळेबंदीमध्ये पाहावयास मिळत आहे. गावाकडे आलेल्या मजुरांना काम मिळेल की नाही आणि शहरांमध्ये कंपनीमध्ये मजूर मिळतील की नाही असाही प्रश्न निर्माण झाला आहे. येणाऱ्या काळात अशा गरीब, मजूर, शेतकरी यांच्या मुलाबाळांच्या शिक्षणाचा, जगण्याचा प्रश्न निर्माण झाला आहे.

अशाप्रकारे कोरोनाच्या लॉकडाऊन (टाळेबंदी) काळातील परिस्थिती ही भयावह आहे. जीवघेणी आहे. तिचे मानवी

जीवनावर खूप मोठ्या प्रमाणावर परिणाम झाले आहेत
भविष्यातही होतीलच.

संदर्भ ग्रंथ :

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पश्चिम मुंबई -३२ दि. १ मे२०२०पृष्ठे..३
- २) डॉ. कोतापळे नागनाथ -अंधश्रद्धा निर्मूलन वार्तापत्र, मे२०२०, संजयनगर,

- सांगली, पृष्ठ ५
- ३) गोडबोले अच्युत-साधना- संपा. विनोद शिरसाठ, शनिवार पेठ ,पुणे ,
मे२०२०, पृष्ठ २६
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पृष्ठ ६

कोविड-१९ चा शैक्षणिक क्षेत्रावरील परिणामाचा अभ्यास

डॉ. दिलीप जानकीराम घोंगडे

सहा.प्राध्यापक, डॉ. बाबासाहेब आंबेडकर समाजकार्य महाविद्यालय, मोराणे, धुळे

प्रस्तावना -

जागतिक व देशाच्या अर्थव्यवस्था लॉकडाऊनमुळे मंदी, बेरोजगाराच्या चक्रात अडकल्यामुळे डळमळीत होत आहेत. ठप्प झालेल्या अर्थव्यवस्थेमुळे हातावर पोट असणाऱ्या कष्टकऱ्यांचे तांडे, शहराकडून गावाकडे निघाले आहेत व उपासमारीने मरायचे की, कोरोनामुळे; या पेचात हा कष्टकरी वर्ग अडकला आहे. चीन-अमेरिका यांच्या आर्थिक सत्तासंघर्षाला 'जैविक युद्धाचे' स्वरूप येत आहे का? या भीतीने जग ग्रासले आहे. जागतिक सत्ता केंद्र युरोप-अमेरिका खंडाकडून आशिया खंडाकडे सरकत आहेत. जागतिक आरोग्य संघटनेने हा कोरोना व्हायरस रोग २०१९ (कोविड-१९) चा उद्रेक हा सार्वजनिक आरोग्यासाठी आंतरराष्ट्रीय आणीबाणी असल्याचे सांगत या उद्रेकाला जागतिक महामारी जाहिर केले. कोरोना विषाणूची साथ हे दूसऱ्या महायुद्धानंतरचे जगासमोरचे मोठे संकट आहे. मानवी जीवनाच्या सर्वच बाजूंवर या संकटाने प्रभाव टाकला आहे. या रोगाला अजून प्रतिजैविके न सापडल्यामुळे रोग होऊ नये, म्हणून प्रतिबंधक उपाय योजणे एवढाच आता सर्वासमोर पर्याय आहे. म्हणून लॉकडाऊनचे धोरण अवलंबून हा रोग आटोक्यात आणण्याचा सर्व देशांत प्रयत्न चालू आहे. या परिस्थितीतून निर्माण झालेल्या अनिश्चिततेमुळे जगभर भीतीचे वातावरण पसरले आहे. लॉकडाऊनमुळे येणाऱ्या सक्तीच्या रिकामेपणामुळे व एकटेपणामुळे कौटुंबिक, सामाजिक, मानसिक आरोग्याच्या समस्या निर्माण होऊ लागल्या आहेत. त्याचप्रमाणे शैक्षणिक क्षेत्रावर परिणाम होऊ लागले आहेत.

अभ्यासाचे उद्देश -

१. कोविड-१९ (कोरोना व्हायरस रोग २०१९) बाबत माहिती अभ्यासणे.

२. कोविड-१९ चा शैक्षणिक क्षेत्रावरील परिणामाचा अभ्यास अभ्यासणे.

अभ्यास पध्दती -

सदर संशोधा अभ्यासामध्ये कोविड-१९चा शैक्षणिक क्षेत्रावरील परिणामाचा अभ्यास करण्यात आला. सदर संशोधा पेपर हा दुय्यम तथ्याद्वारे बाविण्यात आला आहे.

कोविड-१९ (कोरोना व्हायरस रोग २०१९) :

कोविड-१९ (कोरोना व्हायरस रोग २०१९) हा एक अति संसर्गजन्य रोग आहे जो गंभीर तीव्र श्वसन सिंड्रोम-संबंधित कोरोना व्हायरस २ अथवा (एसएआरएस-कोव्ह-२) (SARS-CoV-2) या नावाच्या नवीन विषाणूद्वारे होतो. ज्या सार्स (SARS-CoV-2) या रोगाने दक्षिण-पूर्व एशियामध्ये थैमान घातले होते त्या कोरोना व्हायरस विषाणूच्या प्रजातीतील पण पूर्णपणे नवीन असा हा विषाणू आहे. डिसेंबर २०१९ मध्ये चीनच्या हुबेई प्रांताची राजधानी वुहानमध्ये या नवीन आजाराची पहिली ओळख करण्यात आली होती आणि त्यानंतर जागतिक स्तरावर या आजाराचा प्रसार झाला व त्याने जागतिक महामारीचे रूप घेतले. या आजाराच्या सामान्य लक्षणांमध्ये ताप, खोकला आणि श्वास लागणे यांचा समावेश आहे, तर इतर लक्षणांमध्ये थकवा, स्नायू दुखणे, अतिसार, घसा खवखवणे, गंध कमी होणे आणि पोटदुखी या लक्षणांचा समावेश असू शकतो. सामान्यतः लागण झाल्यापासून लक्षणे दिसण्यापर्यंतचा कालावधी हा दोन ते चौदा दिवसांचा असू शकतो. बहुतेक प्रकरणांमध्ये सौम्य लक्षणे आढळतात, तर काही रोग्यांमध्ये व्हायरल निमोनिया आणि बहु-अवयव निकामी होण्याची भीती असते. १९ एप्रिल २०२० पर्यंत जगातील १८५ देशातील २३,५६,४७५ पेक्षा जास्त लोकांना हा रोग झाला असल्याची प्रकरणे नोंदवली गेली आहेत व परिणामी १,६२,०७० पेक्षा जास्त लोक मरण पावले आहेत. ६,०५,१४३ पेक्षा जास्त लोक बरेही झाले आहेत. एकूण संसर्ग झालेल्या रोग्यांपैकी ७% लोकांचा मृत्यू झाला आहे. महाराष्ट्रातील कोरोना विषाणू उद्रेकातील पहिल्या रूग्णाची नोंद ९ मार्च २०२० रोजी पुण्यात झाली. हा विषाणू प्रामुख्याने जवळच्या संपर्कादरम्यान खोकल्यामुळे, शिंकण्यामुळे किंवा बोलताना नकळत बाहेर पडणाऱ्या थुंकीच्या तुषारांमुळे लोकांमध्ये पसरतो. हे थेंबे अथवा तुषार श्वासोच्छ्वासाच्या दरम्यानदेखील बाहेर पडून आजूबाजूच्या जमिनीवर किंवा पृष्ठभागांवर पडतात व अशा दूषित पृष्ठभागाला हाताने स्पर्श करून आणि नंतर तोच त्यांच्या चेहऱ्याला लावल्यानेही लोक संक्रमित होऊ शकतात. हे विषाणू ७२ तासांपर्यंत या दूषित पृष्ठभागांवर जिवंत राहू शकतात. लक्षणे दिसल्यानंतरच्या पहिल्या तीन दिवसात हा विषाणू सर्वात जास्त संक्रामक

असतो, परंतु रोगाची लक्षणे दिसण्यापूर्वी देखिल आणि रोगाच्या नंतरच्या टप्प्यात देखिल फार संक्रामक असतो. या रोगाच्या निदानाची मानक पद्धत म्हणजे नाकातून घेतलेल्या नमुन्यांची रीअल-टाईम रिव्हर्स ट्रान्सक्रिप्शन पॉलिमेरेज चेन रिएक्शन (आरआरटी-पीसीआर) (Rrt-PCR) नावाची तपासणी होय.

वारंवार साबणाने व्यवस्थित हात धुणे, इतरांशी शारीरिक अंतर राखणे (विशेषतः लक्षणे असणाऱ्या लोकांकडून), खोकताना किंवा शिकताना रुमालाचा वापर करणे. अचानक शिक आली असताना व रुमाल जवळ नसल्यास कोपर तांडावर धरून हाताच्या आतल्या बाजूला शिकणे, न धुतलेले हात चेहऱ्यापासून दूर ठेवणे या व अशा उपायांचा वापर केल्यास विषाणूचा प्रादुर्भाव रोखण्यात मदत होते. ज्यांना विषाणूची लागण झाल्याचा संशय आहे अथवा सौम्य लक्षणे दिसत आहेत अशांना आणि त्यांची काळजी घेणाऱ्या अथवा त्यांच्या संपर्कात येणाऱ्या सर्वांना मास्क वापरण्याची शिफारस केली जाते. साध्या, कोरोना व्हायरस रोग २०१९ (कोविड-१९) वर जगात कोणतीही लस किंवा विशिष्ट उपचार नाहीत. फक्त रोग्याच्या लक्षणांवर आधारित उपचार, प्रतिकार शक्ती वाढविण्याचे उपाय, विलगीकरण व काही प्रयोगात्मक उपाय या गोष्टींचा उपचार म्हणून वापर केला जातो.

कोविड-१९ चा शैक्षणिक क्षेत्रावरील परिणाम -

कोरोनाला रोखण्यासाठी अनेक देशांनी शिक्षणसंस्थानसुध्दा बंद केल्या आहेत. 'युनोस्को' च्या अहवालानुसार एप्रिल २०२० मध्ये १८८ कोटी विद्यार्थी घरी बसले आहेत. भारतात १५ लाख शाळा बंद आहेत. त्यामुळे २६ कोटी विद्यार्थी व ८९ लाख शिक्षक घरी बसले आहेत, तर उच्च शिक्षणात ५० हजार शिक्षणसंस्था बंद आहेत व ३.७० कोटी विद्यार्थी आणि १५ लाख महाविद्यालयीन शिक्षक घरी बसले आहेत. ३० कोटी विद्यार्थ्यांनी रिकामेपणे घरी बसणे हा एक टाईमबॉम्ब आहे. सध्या कोरोनाची समस्या ही केवळ आरोग्याची समस्या आहे, असे मानले जात आहे; पण या संकटाला शैक्षणिक समस्यांची बाजू आहे, हे सुद्धा लक्षत घेणे आवश्यक आहे. लोकांचे रिकामेपण, एकटेपण घालविण्यासाठी रामायण, महाभारतसारख्या मालिका दूरदर्शनवर दाखवून भूतकाळातल्या आभासी जगात जनतेला रमवून, वर्तमानातील समस्यांवर मात करता येणार नाही. 'युनेस्को' ने शाळाबाह्य झालेल्या विद्यार्थ्यांच्या समस्येवर तातडीने मार्ग काढण्याच्या सूचना आपल्या सभासद देशांना दिल्या आहेत. शिक्षणात आलेल्या या व्यत्ययाने मुलांना शिक्षण हक्कापासून वंचित राहावे लागत आहे, असे मत 'युनेस्को' ने नोंदविले आहे. दूरशिक्षण, माहिती तंत्रज्ञानाचा वापर, यू-ट्यूब, हॅंगआऊट, मल्टिमिडीया, मोबाईल फोन, ई-लायब्ररी, दूरदर्शन इ. माध्यमांतून अनेक देशांनी तातडीने, मुलांचे शिक्षण खंडित होऊ नये म्हणून वरील प्रकारचे

उपक्रम पुढच्या वर्गात प्रवेश देणे एवढ्यापुरतेच निर्णय घेतले जात आहेत. परिस्थितीची अनिश्चितता लक्षात घेतली, तर भारताने सुध्दा दीर्घ काळासाठी शैक्षणिक धोरण ठरविणे आवश्यक आहे. भारतात उच्च शिक्षणात व मेडिसीन, इंजिनीअरिंग, कॉमर्स व मॅनेजमेंट यांसारख्या व्यावसायिक अभ्यासक्रमात माहिती तंत्रज्ञानाचा वापर मोठ्या प्रमाणावर केला जातो. विद्यार्थी आर्थिकदृष्ट्या वरच्या स्तरातील असल्यामुळे लॉपटॉप, इंटरनेट इ. खर्च त्यांना परवडतो. त्यामुळे प्रामुख्याने अभिजन वर्गाच्या छोट्या गटांचा अभ्यास, ऑनलाईन चालू आहे. हाच अनुभव शालेय शिक्षणातही आहे. ज्या उच्च मध्यमवर्गीयांची मुले, सर्व सोयींनी युक्त अशा पंचतारांकित शाळेत जात आहेत, त्यांचेही ऑनलाईन शिक्षण चालू आहे.

समस्या आहे, ती बहुसंख्य कष्टकरी, गरीब वर्गातील मुलांची, भटके-विमुक्त, आदिवासी, ग्रामीण भागातील सरकारी किंवा अनुदानित शाळेत जाणाऱ्या मुला-मुलींची! माहिती तंत्रज्ञानामुळे शिक्षणाचा प्रसार, शिक्षणाचा विस्तार, शिक्षणाचा दर्जा, शिक्षणाची संधी वाढविण्यास भरपूर वाव आहे. 'ट्राय'च्या अहवालानुसार भारतात २०२० मध्ये इंटरनेट वापरणाऱ्यांची संख्या ६८.४५ कोटी आहे. मोबाईल फोन वापरणाऱ्यांची संख्या ४८.८२ कोटी आहे. तर, इंटरनेटसह स्मार्टफोन वापरणाऱ्यांची संख्या ४०.७२ कोटी आहे. तर टीव्ही पाहणाऱ्यांची संख्या ७६ कोटी आहे. हा माहिती तंत्रज्ञानाचा विस्तार झालेला दिसत असला तरी त्यात प्रचंड विषमता आहे. भारतात ५२ टक्के जनता इंटरनेटचा वापर करते. म्हणजे निम्मा भरत इंटरनेटच्या लाभापासून वंचित आहे. ग्रामीण भागात ३६ टक्के जनता व शहरात ६४ टक्के जनता इंटरनेटचा वापर करते, तर ६७ टक्के पुरुष व ३८ टक्के स्त्रिया भारतात इंटरनेटचा वापर करतात. माहिती-तंत्रज्ञान हे शहरी, सधनवर्ग व पुरुष यांचीच सध्या तरी मक्तेदारी होत आहे. त्यामुळे 'नॅशनल डिजिटल लायब्ररी', 'स्वयम', 'शोध गंगा' इ. सरकारी प्रकल्पांचा फायदा मर्यादित होत आहे. या प्रकल्पांच्या ऑनलाईन शिक्षणात, कॉम्प्युटरची किंमत, इंटरनेटचा खर्च, विजेचा पुरवठा इ. प्रमुख अडचणी आहेत. त्यामुळे ऑनलाईन शिक्षण ही चैन शहरातील सधनवर्गाला परवडते! अनेक अप्रगत देशातसुध्दा अशीच परिस्थिती आहे. म्हणून त्या देशांनी टीव्ही माध्यमाचा वापर शाळा बंदच्या काळात जास्त करायला सुरुवात केली आहे. भारतात मात्र अशा कोणत्याही योजनेची साधी चर्चाही सुरू झालेली नाही. भारतात नऊशेहून अधिक चॅनेल्स आहेत व घरी बसलेल्या विद्यार्थ्यांसाठी या चॅनेलचा वापर करसा करून घेता येईल, याबद्दल शिक्षण खात्याकडून काही पावले उचलली जाणे आवश्यक आहे. परदेशात शिक्षणासाठी गेलेले भारतीय विद्यार्थी व त्यांचे पालक

यांच्यासमोर लॉकडाऊनमुळे अडचणीचे डोंगर उभे राहिले आहेत. अभ्यासक्रमाचे बिघडलेले वेळापत्रक, आर्थिक ताण, व्हिसाच्या मुदतीचे प्रश्न, नोकरी मिळण्याची अनिश्चितता, शिक्षणकर्जाच्या हप्त्यांचे दडपण इ. मुळे परदेशातील भारतीय विद्यार्थी दडपणाखाली आहेत.

५ एप्रिल २०२० रोजी मानव संसाधनमंत्री पोखरियाल यांनी असे आश्वासन दिले आहे की, विद्यार्थ्यांचे शैक्षणिक नुकसान या लॉकडाऊन काळात होणार नाही याची काळजी घेतली जाईल. पण, शैक्षणिक नुकसान म्हणजे परीक्षा पुढे ढकलणे नव्हे, तर विद्यार्थ्यांच्या अभ्यासात खंड पडणार नाही, याची काळजी घेणे होय, कष्टकरी जनतेची मुले डोळ्यांसमोर ठेवून शाळा बंदच्या काळात या समाजघटकातील मुलांचे शिक्षण कसे अखंडपणे चालू राहील याची योजना केंद्र व राज्य सरकारनी तातडीने करावी.

शाळांमधून कोरोना व्हायरसचा प्रादुर्भाव रोखणे सुलभ करण्यासाठी महाराष्ट्र शासनाने इयत्ता १ ते ८ वी च्या सर्व परीक्षा रद्द केल्या व विद्यार्थ्यांना पुढील वर्गात प्रवेश देण्यात आला. तसेच उपाययोजनेचा एक भाग म्हणून विद्यापीठ, महाविद्यालयीन आणि सीईटी परीक्षा कक्षाचे नियोजित वेळापत्रक पुढे ढकलण्यात आले. १२ एप्रिल २०२० रोजी दहावीचा भूगोलाचा पेपर तसेच नववी आणि अकरावी परिक्षाही रद्द करण्याचा निर्णय झाला.

कोरोनाचा प्रादुर्भाव रोखण्यासाठी मार्च महिन्यात शाळा आणि महाविद्यालयं बंद करण्यात आली होती. महाविद्यालयीन परीक्षा पुढे ढकलण्यात आल्या आहेत. त्याची तारीखही जाहीर करण्यात आलेली नाही. अशात आता विद्यापीठ अनुदान आयोगाने महाविद्यालयं सुरू व्हायला ऑगस्ट महिना उजाडेल अशी माहिती दिली आहे. २०२०-२१ हे शैक्षणिक वर्ष सुरू होण्यासाठी १ ऑगस्ट ही तारीख देण्यात आली आहे. अर्थात विद्यापीठ अनुदान आयोगाने दोन वेळापत्रक दिली आहेत. एक २०१९-२० या वर्षासाठी आहे. कोरोनाचा प्रादुर्भाव टाळण्यासाठी महाविद्यालयं बंद करण्यात आली. त्यामुळे या वर्षातला जो पाठ्यक्रम अपूर्ण राहिला आहे. त्यासाठी एक वेळापत्रक आणि नव्या शैक्षणिक वर्षासाठी एक वेळापत्रक देण्यात आलं आहे.

२०१९-२० या शैक्षणिक वर्षासाठी अपूर्ण राहिलेला पाठ्यक्रम ऑनलाईन/ डिस्टन्स लर्निंग/ सोशल मीडिया/ व्हिडीओ कॉन्फरन्सिंग यांच्या माध्यमातून ३१ मे २०२० पर्यंत शिकवण्यात येऊन पूर्ण करण्यात यावा असं विद्यापीठ अनुदान आयोगाने म्हटलं आहे. तसंच प्रोजेक्ट वर्क, इंटरनॅशनल रिपोर्ट, ई लेबल्स, अभ्यासक्रम पूर्ण शिकवून होणे, अंतर्गत मूल्यमापन, असाइनमेंट हे सगळं १ जून ते १५ जूनपर्यंत पूर्ण करण्यात यावं. यानंतर होणाऱ्या परीक्षा १ जुलै ते ३१ जुलै या

दरम्यान घेतल्या जातील. तसंच या परीक्षांचे निकाल ३१ जुलै २०२० रोजी जाहीर केले जातील. २०२०-२१ या शैक्षणिक वर्षासाठीची महाविद्यालयांसाठी नवीन विद्यार्थ्यांची प्रवेश प्रक्रिया ऑगस्ट महिन्यात पार पडेल. त्यांचं शैक्षणिक वर्ष सप्टेंबर महिन्यापासून सुरू होईल. जे जुने विद्यार्थी आहेत त्यांच्यासाठीचं शैक्षणिक वर्ष १ ऑगस्ट २०२० सुरू होईल असंही युजीसीने स्पष्ट केलं आहे. कोरोना विषाणूचा प्रादुर्भाव रोखण्यासाठी राज्यात सध्या लॉकडाऊन कालावधी सुरू आहे. त्या अनुषंगाने युजीसीने दिलेल्या मार्गदर्शक सूचनांनुसार राज्यातील सर्व अकृषी विद्यापीठांच्या परीक्षेसंदर्भात उच्च व तंत्रशिक्षण विभागाने नेमलेल्या समितीचा अहवाल शासनाला सादर केला आहे. त्यानुसार सर्व पदवी व पदव्युत्तर कोर्सच्या अंतिम वर्षाच्या अंतिम सत्राच्या परीक्षा या दिनांक १ जुलै ते ३० जुलै या दरम्यान घेण्यात येतील.

समितीने केलेल्या शिफारशीनुसार ज्या विद्यार्थ्यांच्या परीक्षा होणार नाहीत त्यांना पुढील वर्गात प्रवेश देण्यात येणार आहे. हा प्रवेश देताना त्यांचे ग्रेड्स व मार्क्स ही त्यांना दिले जातील. मार्क्स देण्याची पद्धती ही विद्यार्थ्यांना मिळणारी ५० टक्के ग्रेड ही अंतर्गत मूल्यमापनावर आधारित व ५० टक्के या पूर्वीच्या सत्रातील परिक्षेचे गुण यावरून ठरणार आहे. पूर्वीच्या परीक्षा किंवा सत्रांचे गुण उपलब्ध नसल्यास वार्षिक सत्राच्या पहिल्या वर्षाच्या परीक्षांच्या बाबत १०० टक्के अंतर्गत मूल्यमापन करण्यात येणार आहे. या गुणांबाबत काही शंका असल्यास तसेच त्यामध्ये मूल्यवर्धन करण्याची विद्यार्थ्यांची इच्छा असल्यास त्यास ऐच्छिक परीक्षा देता येणार आहे. अशा प्रकारच्या परीक्षांबाबत विद्यापीठ स्तरावर निर्णय घेण्यात येणार आहे. तसेच दुर्दैवाने जर एखादा विद्यार्थी या परीक्षांमध्ये नापास झाला तर त्यालाही पुढील वर्षात प्रवेश दिला जाईल पण, त्यांना नापास झालेल्या विषयांची परीक्षा द्यावी लागेल. या विषयीचे वेळापत्रकाचे निर्णय ही विद्यापीठ स्तरावर घेण्यात येणार आहेत. एटीकेटीच्या विद्यार्थ्यांनाही हाच नियम लागू असणार आहे. हा निर्णय घेत असताना कोणत्याही विद्यार्थ्यांचे शैक्षणिक वर्षाचे नुकसान होणार नाही याची पूर्ण दक्षता घेण्यात येईल.

१. स्वायत्त विद्यापीठांनाही विद्यापीठ अनुदान आयोगाच्या (युजीसी) निर्देशाप्रमाणे याच फॉर्मेटद्वारे परीक्षा घ्याव्या लागणार आहेत.
२. चार वर्षाचा कोर्स असणाऱ्या विद्यार्थ्यांना केवळ आठव्या सत्राची (सेमिस्टर) परीक्षा द्यावी लागणार आहे. तसेच पाच वर्षाचा कोर्स असणाऱ्या विद्यार्थ्यांना केवळ १० व्या सेमिस्टरची परीक्षा द्यावी लागेल.
३. ज्या अभ्यासक्रमाच्या परीक्षा वार्षिक होतात,

- त्यांच्या केवळ अंतिम वर्षांच्या विद्यार्थ्यांची परिक्षा घेण्यात येईल.
४. दोन वर्षांच्या अभ्यासक्रमाच्या केवळ चौथ्या सत्राची (सेमिस्टर) परीक्षा होईल.
 ५. गोंडवाना विद्यापीठ हे हिरव्या पट्ट्यामध्ये (ग्रीन झोन) येत असल्यामुळे तेथील अंतिम वर्षांच्या विद्यार्थ्यांच्या परिक्षा घेण्याबाबत मुभा दिली आहे. या विद्यापीठांतर्गत गडचिरोली आणि चंद्रपूर हे जिल्हे येतात. येथील भौगोलिक परिस्थिती पाहून विद्यापीठ स्वतःच्या वेळापत्रकानुसार परिक्षा घेईल.
 ६. एसएनडीटी विद्यापीठाच्या राज्यातील माहविद्यालयीन परिक्षा या वेळापत्रकानुसारच होतील इतर राज्यातील त्याच्या परिक्षेच्या वेळापत्रकानुसार होतील.
 ७. उन्हाळी सुट्टीबाबत सर्व विद्यार्थी, प्राध्यापक, शिक्षकेत्तर कर्मचारी यांचा विचार करून संबंधित विद्यापीठ अंतिम निर्णय घेईल.
 ८. नवीन शैक्षणिक वर्ष हे १ सप्टेंबर पासून सुरू करण्यासाठी सर्व परिक्षांचे निकाल हे दि. १५ ऑगस्ट पर्यंत लावण्यात येतील.
 ९. सामाईक प्रवेश परिक्षांच्या (सीईटी) बाबतीत येत्या ८ दिवसांत निर्णय जाहीर करण्यात येईल.
 १०. पदविका, पदवी आणि पदव्युत्तरच्या अंतिम वर्षांच्या प्रॅक्टिकलच्या परिक्षा जर माहविद्यालयात घेता आल्या नाहीत तर विद्यार्थ्यांनी सादर केलेल्या जर्नल किंवा ऑनलाईन ओरल घेऊन गुणांकन

केले जाईल.

सारांश -

विद्यार्थी व पालक यांच्या शंकांचे निरसन करून त्यांच्या सामुपदेशनासाठी प्रत्येक जिल्ह्यात केंद्र स्थापन करावा. अंतिम वर्षांच्या सर्व विद्यार्थ्यांनी १ जुलै ते ३० जुलै दरम्यान परिक्षा होणार आहेत असे नजरेसमोर ठेऊन अभ्यास सुरू करावा. तसेच ज्या विद्यार्थ्यांच्या परिक्षा होणार नाहीत त्यांनीही सुट्टी आहे, अभ्यास नाही म्हणून घराबाहेर न पडता घरातच रहावे. उन्हाळी सुट्टीबाबत प्राध्यापक, शिक्षकेत्तर कर्मचारी या सर्वांचा विचार करून प्रत्येक विद्यापीठाने त्यांच्या स्तरावर निर्णय घ्यावा. लॉकडाऊनच्या काळात विद्यार्थी हे महाविद्यालयांमध्ये उपस्थित होते असे गृहीत धरूनच त्यांची उपस्थिती गृहीत धरण्यात येणार आहे. त्यामुळे विद्यार्थ्यांनी आता कोणत्याही प्रकारच्या संभ्रमास बळी पडू नये व आपल्या अभ्यासावर व शैक्षणिक सत्रांवर लक्ष केंद्रीत करावे. काही परदेशी विद्यापीठे या काळात पर्याय म्हणून चौथ्या औद्योगिक क्रांतीचे तंत्रज्ञान, कृत्रिम बुद्धिमत्ता, रोबोटिक याचा वापर करण्याचा प्रयत्न करीत आहेत. पण, एकूण ७,५०,००० परदेशातील भारतीय विद्यार्थी संकटात आहेत. त्यांना मदत करण्यासाठी परराष्ट्र मंत्रालय, अर्थ मंत्रालय व मानव विकास मंत्रालयांनी एकत्रित योजना करणे ही काळाची गरज आहे.

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कोरोना विषाणूचे शैमान आणि शिक्षण व्यवस्थेवरील परिणाम

बी. व्ही. गावीत

राज्यशास्त्र विभाग,

सार्वजनिक कला व विज्ञान महाविद्यालय, विसरवाडी ता.नवापूर जि.नंदुरबार

आज संपुर्ण जगात कोरोना विषाणूने हाहाकार माजविला आहे. संपुर्ण जग कोरोनाच्या दहशतीखाली आहे. ३१ डिसेंबर २०१९ रोजी चीनच्या वुहान प्रांतात कोरोनाचा संसर्ग झाला आणि त्यानंतर हळूहळू दिवसेंदिवस कोरोना विषाणू अक्राळविक्राळ रूप धारण करीत आहे. या विषाणूचा प्रादुर्भाव रोखण्यासाठी आंतरराष्ट्रीय स्तरावर उपायोजना केल्या जात आहे. त्यासाठी लॉकडाऊन हा मार्ग स्विकारला आहे. चीनसह इटली, स्पेन, अमेरीका, इंग्लंड यासारख्या बलाढ्य राष्ट्रांनी पुर्णबंदी स्विकारली आहे. यामुळे जग थांबले. रस्ते निर्मनुष्य बनले. व्यवहार ठप्प झाले. लॉकडाऊनमध्ये संचारबंदी लागू करण्यात आली. हवाई वाहतुक, जलवाहतुक आणि महामार्गावरील वाहतुक पुर्णपणे बंद करण्यात आली. जागतिक आरोग्य संघटनेने कोरोना संक्रमणाचा वेग लक्षात घेता त्यास जागतिक महामारी म्हणून घोषित केले आहे. चीनसह अमेरीका, स्पेन, इटली, इंग्लंड यासारख्या देशात कोरोना संसर्ग व त्यामुळे मृत व्यक्तींची संख्या हजारोंच्या घरात आहे. सोशियल डिस्टॅन्सिंग, कोरॉनोटाईन, लॉकडाऊन, आयसोलेशन, सेनिटायझेशन यासारख्या नवीन शब्दांमुळे भितीयुक्त वातावरणात भर पडत आहे.

भारतात २२ मार्चला जनता कर्फ्यू आणि त्यानंतर पुर्ण लॉकडाऊन मार्गाचा अवलंब करण्यात आला. सलग ३ वेळा लॉकडाऊन वाढविण्यात आला. लॉकडाऊनच्या घोषणेमुळे संपुर्ण देश थांबला. अत्यावश्यक सेवा वगळता सर्वच व्यवहार पुर्णपणे बंद करण्यात आले. केंद्रसरकार, राज्यसरकार, स्थानिक प्रशासन यांनी जनतेस मार्गदर्शक सूचना देऊन मोठ्या प्रमाणात जनजागृती केली. वर्तमानपत्रे, दूरदर्शन, आकाशवाणी, सोशल मिडीया यासारख्या साधनांचा मोठ्या प्रमाणात वापर करण्यात आला. डॉक्टर्स, नर्स, पोलीस, जवान, सफाई कामगार यांनी अहोरात्र मेहनत सुरु ठेवली. त्यामुळे त्यांना कोरोना योद्धा असे नांव देण्यात आले. असे असताना त्यांच्यावर हल्ले झाले. त्यातील काही योद्धा कोरोना बाधित झाले. दूद्वाने यात काहींचा जीव गेला, त्यामुळे सकारात्मक परिणाम म्हणून कोरोना विषाणूचा संसर्ग सामुहिक स्तरावर म्हणजेच तिसऱ्या टप्प्यात रोखण्यात यश आले असे म्हणता येईल. कोरोना योद्धांचा टाळ्या वाजवून अभिनंदन करणे असो किंवा दिवा,

मेणबत्ती वा लाईट लावून सामुदायिक एकतेचे दर्शन घडविणे असो, प्रत्येक भारतीय या संकटकाळात कोरोनाशी लढाई करून विजय मिळविणार असा आत्मविश्वास प्रत्येक भारतीय व्यक्तीच्या मनात बिंबविण्यात सरकार प्रयत्न करीत आहे. असे असले तरी अनेक लोकांना कोरोना संसर्गाचा गांभीर्याचा अंदाज नाही असे खेदाने म्हणावे लागते.

भारतातील महानगरांमध्ये कोरोनाने शैमान घातले आहे. मुंबई, पुणे, दिल्ली यासारखी महानगरे रेड झोनमध्ये समाविष्ट करण्यात आली. कोरोनाचे संकट वाढत चालले आहे याचा अंदाज घेत आरोग्यसेवा वाढविण्यावर सरकारमार्फत आटोकाट प्रयत्न केले जात आहे. कोरोनाच्या जागतिक महामारीमुळे सर्वच क्षेत्रांवर त्याचा विपरित आणि दूरगामी परिणाम दिसून येतात. जागतिक स्तरावर उद्योगव्यापार बंद झाल्यामुळे जागतिक पातळीवर आर्थिक संकट ओढावले आहे. हजारो नव्हे तर करोडो लोकांवर बेरोजगारीची कुऱ्हाड पडली आहे. लाखो कंपन्या बंद पडल्यामुळे बेरोजगारीत वाढ होणार आहे. एकट्या चीनमध्ये ८ कोटी रोजगार गेले आहेत तर चार लाख कंपन्या चीन सोडून जाण्याच्या तयारीत आहेत. यामुळे जागतिक स्तरावर आर्थिक आणीबाणीची शक्यता निर्माण झाली आहे.

लॉकडाऊनमुळे आंतरराष्ट्रीय सीमा, आंतरराज्य सीमा व जिल्हा बंदी करण्यात आल्यामुळे हजारो कामगार, भाविक, देश विदेशातील विद्यार्थी बाहेर अडकून पडले आहेत. लॉकडाऊनचा कालावधी तिसऱ्यांदा वाढविल्यामुळे त्यांच्यात असुरक्षिततेची भावना वाढीस लागण्याची दाट शक्यता आहे. विद्यार्थ्यांचे शैक्षणिक नुकसान होणार नाही याची काळजी सरकारकडून घेण्यात येत आहे. देशात कोरोना विषाणूचा प्रादुर्भाव रोखण्यासाठी प्रतिबंधात्मक उपायोजना केल्या जात आहेत. शिक्षणव्यवस्था कोलमडून पडू नये यासाठी काही दिलासादायक निर्णय शासनाकडून घेतले गेले आहेत. महाराष्ट्रात शिक्षण बोर्डांनी इ. १० वी चा भूगोल विषयाचा पेपर रद्द करून विद्यार्थ्यांना त्या विषयास सुट देण्याचा निर्णय घेतला आहे. उच्च शिक्षण विभागानेही विद्यार्थ्यांचे हित लक्षात घेता विविध आदेश व परिपत्रके काढून अंमलबजावणीस प्राधान्य दिले आहे. देशातील व राज्यातील कोरोना विषाणूचा प्रादुर्भाव

रोखण्यासाठी सर्वच विद्यापीठे, महाविद्यालये, प्रशिक्षण संस्था बंद ठेवण्याबाबतचे आदेश निर्गमित करण्यात आले आहे. आजारी विद्यार्थी इतर विद्यार्थ्यांच्या संपर्कात येणार नाही यासाठी दक्षता घेण्याबाबत प्राचार्य वा संस्थाचालक यांना सूचित करण्यात आले आहे. कोरोना विषाणूचा संसर्ग होऊ नये म्हणून १३ मार्चपासून राज्यातील शिक्षणव्यवस्था ठप्प झालेली आहे. यामुळे विद्यार्थ्यांस वर्गात उपस्थित राहण्यास प्रतिबंधित करण्यात आले आहे. वसतिगृहात राहत असलेल्या विद्यार्थ्यांनी स्वतःच्या सुरक्षिततेबाबत आवश्यक ती खबरदारी घ्यावी, ज्यांची परीक्षा नाही त्यांनी अधिकांकंच्या परवानगीने घरी जावे असा आदेश निर्गमित करण्यात आला आहे.

मानव संसाधन विभाग, विश्वविद्यापीठ अनुदान आयोग आणि राज्यांचे उच्च शिक्षण विभागामार्फत विविध विद्यापीठांचे कुलगुरुसोबत आभासी वर्गांच्या मदतीने वेळोवेळी संवाद साधून विद्यार्थ्यांची मानसिकता आणि मनोबल वाढविण्यासाठी धोरण ठरविणे व त्यांची अंमलबजावणी करणेबाबत आवाहन केले जात आहे. आधुनिक तंत्रज्ञानाचा वापर करण्याविषयी सूचना केल्या जात आहेत. ऑनलाईन अध्ययन प्रणाली विकसित करून त्याच्या वापराविषयी आग्रह धरण्यात येत आहे.

त्याचबरोबर विद्यार्थ्यांचे आरोग्य, सुरक्षा आणि भविष्य

सर्वात महत्त्वाचे मानून घरातून अभ्यास करू देण्यावर भर देण्यासंबंधी उपाययोजना करण्यास सूचित करण्यात येत आहे. त्याकरीता ई-लर्निंग सॉफ्टवेअर विकसित करण्यावर भर द्यावा. त्यात पावर पॉईंट, झुम, कास्टीया, इलेक्ट्रा इत्यादींचा विकास केला जात आहे. अध्ययनासह अध्यापन व मूल्यमापन प्रक्रियेतही अमुलाग्र बदल करणे आणि सर्वात महत्त्वाचे म्हणजे शाळा व महाविद्यालयांनी ऑनलाईन कौन्सिलिंग आणि मानसिक आरोग्य सेवेला सुरुवात करणे गरजेचे आहे. कोरोनाचा प्रादुर्भाव टाळण्यासाठी व विद्यार्थ्यांचे आरोग्य उत्तम रहावे यासाठी वरील उपक्रम शाळा महाविद्यालये व उच्च शिक्षण संस्था व विद्यापीठांनी सुरु करणे, विद्यार्थ्यांची चिंता, निराशा दूर व्हावी आणि संकटकाळात त्यांची मानसिकता टिकून रहावी याकरीता मानसशास्त्रीय समुपदेशन करणे आवश्यक आहे नव्हे ती एक काळाची गरज आहे.

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कोरोनाचा भारतीय जनजीवनावर झालेला परिणाम

डॉ. लोंढे वनमाला सोपानराव

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कोरोना या संसर्गजन्य विषाणूमुळे संपूर्ण जगात थैमान घातले आहे. त्यामुळे आज जगभरात दररोज हजारो लोक मृत्युमुखी पडत आहेत. कोरोना विषाणूचा विळखा जगात वाढत आहे. दररोज लाखो लोक आजारी पडत आहेत. पहिल्यांदा चीनच्या वूहान शहरात धुमाकूळ घातलेला कोरोना आज घडीला संपूर्ण जगात व्यापला आहे. यामुळे संपूर्ण जग चिंतेत आहे. कोरोनाला दोन हात करण्यासाठी समाजातील प्रत्येक घटक झटत आहे. प्रत्यक्षपणे स्वतःच्या जीवनाचा विचार न करता प्राण हातावर घेऊन डॉक्टर, परिचारिका, पोलीस, पत्रकार, सफाई कामगार अहोरात्र काम करून खऱ्या अर्थाने समाजाची सेवा करत आहेत. लोकांना जागृत करत आहेत. या कार्यामध्ये काहींना हकनाक बळी जाताना दिसत आहे. कोरोनाचा समाजातील जीवनावर झालेला परिणाम पहाता सर्व भारतीय लोकांनी भारत सरकारच्या हाकेला प्रतिसाद देऊन भारतीयानी जगात एक आदर्श निर्माण केलेला आहे. १२५ कोटी जनतेच्या या देशात कोरोना विषाणू Lockdown शस्त्राने जखडून ठेवण्यामध्ये आपल्याला थोड्या प्रमाणात यश आले आहे. Lockdown च्या काळात प्रत्येक माणसाला या छोट्याशा कोरोना विषाणूने विचार करायला भाग पाडले आहे. जात-पात-धर्म, लिंग, उच्च-नीच, श्रीमंत-गरीब असा भेद त्याच्याजवळ नाही. आपण आपली लक्ष्मणरेषा न ओलांडता विषाणूला कसे परतवून लावता येईल यासाठी आपल्या प्रशासकीय यंत्रणेला एकजुटीने सहकार्य केले पाहिजे, तरच आपण कोरोलाला हरवू शकतो. कोरोना प्रतिबंधक लस शोधण्यासाठी संशोधक आणि यंत्रणा प्रयत्नांची पराकाष्ठा करीत आहे परंतु अद्याप यश मिळालेले नाही. परंतु एक दिवस नक्कीच यामध्ये शास्त्रज्ञाला यश येईल व मानवाचा विजय होईल यात शंका नाही. परंतु वर्तमान काळात या कोरोना विषाणूचा गंभीर परिणाम भारतीय जनजीवनावर झालेले आहेत. या परिणामांची झळ भविष्यकाळात मानवाला सोसावी लागेल यात शंका नाही. यासंदर्भातील थोडक्यात विवेचन खालील प्रमाणे.

कोरोना भारतीय जनजीवनावर विपरीत परिणाम होताना दिसत आहे. कोरोनावर प्रभावी लस अजून सापडलेली नाही. भारतात Lockdown चालू आहे. Lockdown होणे म्हणजे

अतिमहत्वाच्या गरजा सोडून आर्थिक व्यवहार व सामान्य व्यवहार थांबणे. Lockdown चा भारतासारख्या विकसनशील देशावर परिणाम होणारच. कोरोनामुळे अनेक उद्योग बंद आहेत. त्याचा फटका सामान्य कामगारांना बसला आहे. अनेक कामगार हाताला काम नाही, पोटाला अन्न नाही, रहायला स्वतःचे घर नाही अशा परिस्थितीत मिळेल त्या वाहनाने पायपीट करत पुणे, मुंबई, नाशिक, औरंगाबाद यासारख्या मोठ्या शहरातून कामगारांचे तांडेच्या तांडे आपल्या मूळ गावाकडे जाताना दिसतात. अशावेळी कामगारांच्या राहण्याचा व जगण्याचा गंभीर प्रश्न निर्माण झालेला आहे. शासनाने इतर गोष्टींपेक्षा माणसाच्या आरोग्याला प्राधान्य दिले आहे हे खरे असले तरी सामान्य माणसाच्या जगण्याचाही प्रश्न सामान्य माणसाच्या जगण्याचे प्रश्न महत्वाचे मानून उपाययोजना केल्या पाहिजेत. भविष्य काळामध्ये कामाचे तास कमी होणे, कामगार कपात त्याचबरोबर पगार कमी या गोष्टींचा फटका बसणार आहे यात शंका नाही. विसनशील देशांनी बेरोजगारीचा सर्वात जास्त फटका बसेल असे इंटरनेशनल लेबर ऑर्गनायझेशनने सांगितले आहे. भारतात कोरोना व्हायरसमुळे झालेल्या बदलत्या परिस्थितीचा अभ्यास करता असे लक्षात येते की, भारताला यावर उपाययोजना करण्यासाठी वेळ मिळाला आहे. त्याचा परिणाम म्हणून भारत सरकारने डब्ल्यू. एच. ओ. च्या निर्देशानुसार लॉकडाऊन वाढवला या काळात भारतातील परिस्थितीत खूपच बदल झालेला दिसून येतो. भारताच्या या निर्णयाचे जगातील काही राष्ट्रांनी कौतुक केले आहे.

लॉकडाऊनमुळे आर्थिक संकट वाढणार आहे. कोरोना व्हायरसच्या प्रादुर्भावामुळे लोकांना घराबाहेर पडता येत नाही. देशातील जनता घरात आहे. अशा परिस्थितीमध्ये श्रीमंत आणि सुशिक्षित लोकांना ऑनलाईन व्यवहारामुळे आपल्या आवश्यक गरजा घर बसल्या मिळवता येत आहेत. परंतु या सुविधा ग्रामीण भागात यशस्वी होताना दिसत नाहीत. शिवाय गरीबी, अज्ञान, निरक्षरता यामुळे देशातील बहुसंख्य लोकांना अन्न-वस्त्र-निवारा यांची चिंता आहे. अनेक लोक उपाशीतापाशी दिवस काढत आहे. अनेक कामगार मजूर कामगार बेरोजगार असे हजारो लोक रस्त्यावर आले आहे. मुळात कोरोना व्हायरस भारतात प्रवेश करण्यापूर्वी भारताच्या

अर्थव्यवस्थेचा विकास दर ४.७ टक्के इतका खाली आला आहे. २०१९ सालातील भारतातील बेरोजगारीचे प्रमाण मागील काही वर्षांच्या तुलनेत सर्वाधिक होते. गेल्या वर्षीच्या अखेरपर्यंत देशाच्या आठ प्रमुख क्षेत्रांचे उत्पादन ५.२ टक्के पर्यंत खाली आले होते. ही गेल्या वर्षातील वाईट परिस्थिती होती. आता त्यात कोरोना व्हायरसने भर टाकली आहे. लॉकडाऊन एका रात्रीत अर्थव्यवस्था स्तब्ध झाली आहे. देशातील अनेक कारखाने सक्षम मध्यम आणि छोटे उद्योग यांची संख्या एकसष्ट पॉईंट एक लाख आहे. ती बंद आहे. आयटी क्षेत्राला घरी बसून काम करण्यास परवानगी दिली असली तरी अनेकांच्या रोजगारावर पाणी फिरले आहे. उद्योगधंदे बंद पडल्यामुळे वस्तूचा पुरवठा घटला आहे. लाखो लोकांचा रोजगार संपुष्टात आला आहे. लोकांकडे पैसा नसल्यामुळे परिस्थिती आज आणखीनच गंभीर बनली आहे. यामध्ये असंघटित क्षेत्राला फार मोठ्या अडचणीला तोंड द्यावे लागत आहे. लॉकडाऊनचा कालावधी अजून वाढला तर भारतावर आर्थिक मंदीचे नक्कीच संकट वाढेल असे वाटते. कारण भारतासारख्या विकसनशील देशाला लॉकडाऊन खूप दिवस परवडण्यासारखा नाही. भारतात विमान प्रवास व वाहतूक व्यवस्थाही लॉकडाऊन संपेपर्यंत ठप्प राहणार आहे. त्यामुळे या क्षेत्रावरही त्याचा विपरीत परिणाम दिसून येतो. सेंटर फॉर एशिया पॅसिफिक एव्हिएशनच्या अंदाजानुसार क्षेत्राच्या सुमारे चार अब्ज डॉलरचे नुकसान होण्याची शक्यता आहे. हॉटेल रेस्टॉरंट, हार्डवेअर, ऑटोमोबाईल्स, देशातील एस. टी. महामंडळ या क्षेत्रातही कोट्यवधीचे नुकसान होण्याची शक्यता नाकारता येत नाही. शिक्षण क्षेत्रही याला अपवाद नाही. अगोदर शिक्षणाचे बाजारीकरण झालेले आहे. त्यातच कोरोनामुळे नववीपर्यंत परीक्षा रद्द झाल्या आहेत. त्याचबरोबर विद्यापीठ, कॉलेज, सीईटी परीक्षा कधी व कशा घ्याव्यात यावर खल चालू आहे. या परीक्षा लांबणीवर जाण्याची शक्यता आहे. यामुळे विद्यार्थी, प्राध्यापक, शिक्षक वर्गामध्ये संभ्रम निर्माण झाला. त्याचबरोबर आपल्या देशात सुशिक्षित बेकारांची संख्या लाखांच्या घरात आहे. आहे त्या लोकांना काम मिळणे अवघड झाले असताना सुशिक्षित बेकारांना काम कुठे देणार हा प्रश्न आहे. सेवा क्षेत्रातील लोकांचा रोजगार कमी होण्याची शक्यता आहे. लोकांना कमी पगारावर काम करावे लागणार आहे. भविष्य काळामध्ये पगार वेळेवर मिळेल का नाही याची शाश्वती देता येणार नाही. भारतीय अर्थव्यवस्थेत महत्त्वाचे क्षेत्र म्हणून शेती क्षेत्राचा उल्लेख केला जातो. आपला देश कृषिप्रधान आहे. ग्रामीण अर्थव्यवस्था शेतीवर आधारित आहे. भारतातील जवळजवळ ५८ टक्के लोक शेती व्यवसायावर अवलंबून आहेत. सध्याच्या परिस्थितीत लोकांचे अन्नधान्याची गरज शेतीतून पुरविली जाते. परंतु संचारबंदीमुळे शेतकऱ्यांना

बाजारपेठेत धान्य आणता येत नाही. धान्य आणि भाजीपाला, धान्याचे साठे घरातच पडून आहेत. भाजीपाला वेळेत मार्केटमध्ये न पोहोचल्यामुळे रस्त्यावर फकून देण्याची वेळ शेतकऱ्यांवर आली आहे. आता जून महिना जवळ आला तरी शेतकऱ्यांना मशागत करण्यासाठी मजूर कोरोनामुळे घराबाहेर येत नाहीत. शेतकऱ्यांचा माल घरातच पडून असल्यामुळे बी-बियाणे खरेदी कशी करावी हा प्रश्न पडला आहे. अगोदर शेतकरी आर्थिक विवंचनेत असताना हजारो शेतकरी महाराष्ट्रात आत्महत्या करत आहेत हा इतिहास आहे आणि कोरोना व्हायरसमुळे त्यांच्या अडचणीत आणखीनच भर पडली आहे. शहरी भागातील अत्यावश्यक गरजा किराणा दुकाने आणि औषधे दुकाने टंचाई निर्माण करून सामान्य ग्राहकांना अक्षरशः लुटताना दिसत आहे. हा कालावधी पुढे वाढवला तर भारताला या मंदी परिस्थितीतून बाहेर पडण्यासाठी एक वर्ष किंवा त्यापेक्षा जास्त कालावधी लागेल.

परंतु सरकारने काही ठोस निर्णय योग्य वेळी अंमलात आणले तर याही परिस्थितीतून बाहेर पडता येईल. कोरोना व्हायरसमुळे काही सामाजिक परिणाम सुद्धा होत आहेत. त्यामुळे तरुणांमध्ये नकारात्मक विचार मनात येत आहेत. लॉकडाऊनमुळे बराच वेळ घरात बसून राहिल्यामुळे तरुणांमध्ये नकारात्मक विचार येत आहे. मला कोरोना होणार नाही ना अनेक प्रश्न मनाला भेडसावत यातूनच मानसिक आजार बळावत आहे. तसेच कोरोनामुळे भरपूर वेळ पती-पत्नी घरात राहत असल्यामुळे कौटुंबिक संघर्ष वाढत आहे.

लॉकडाऊन काळात पती-पत्नीच्या एकमेकांविष्वद्ध तक्रारी पोलीस स्टेशनमध्ये आढळून आल्या आहेत. कोरोना मुळे घरातच राहिल्यामुळे अनेक लोक आपली नोकरी राहिल का? आपला व्यवसाय टिकून राहिल का? या प्रश्नाने चिंताग्रस्त आहेत यातूनच मानसिक संतुलन बिघडून आत्महत्या होत आहेत. यामुळे सामाजिक संतुलन ढासळत आहेत ही गंभीर बाब आहे अशा प्रकारे कोरोना विषाणूमुळे जनजीवनावर विपरीत परिणाम घडून येत आहेत. पण तरीही यावर एकसंधपणे शासनाने घालून दिलेल्या नियमांचे काटेकोरपणे पालन करून व घरात राहून कोरोनावर भारतीय खंबीर मनाचा नागरिक विजय मिळवून पुन्हा एकदा जनजीवन पूर्वपदावर येईल यात शंका नाही. उपाययोजना कोरोनाचा प्रादुर्भाव भारतापासून दूर ठेवण्यासाठी कोरोना चाचणी वाढवली पाहिजे. सामाजिक सुरक्षित अंतर राखले पाहिजे. औषधी साठा मुबलक प्रमाणात वाढवला पाहिजे. अर्थमंत्री श्रीमती निर्मला सीतारामन यांनी एक पॉईंट ७० लाख कोटी मदतीचे पॅकेज दिले आहे ही चांगली बाब आहे पण त्यात वाढ झाली पाहिजे. शासकीय मदत जीडीपीच्या कमीत कमी दोन ते तीन टक्केपर्यंत करावी लागेल. धोरणाच्या संदर्भात जनजागृती करणे, कोरोनाचे स्वतंत्र सुसज्ज हॉस्पिटल

उभारणे, कृषी क्षेत्रातील शेतकऱ्यांच्या मालाला योग्य भावात खरेदी करणे आणि शेतीला सुरक्षितता देणे. लॉकडाऊनच्या काळात जास्तीतजास्त गरीबांना सर्व अत्यावश्यक धान्य घरपोच देणे, देणगी मार्फत आलेले कोरोना रुग्णाच्या व्यवस्थेवर खर्च करावा लागेल. आरोग्य विभागातील कर्मचाऱ्यांना सर्व सुविधा पुरवणे, आरोग्य विभागातील रिक्त पदे तातडीने भरणे व त्यांना संरक्षण देणे उद्योगाच्या उभारणीसाठी प्रोत्साहनपर योजना आखणे, कर्मचाऱ्यांच्या पगारातून सरकार टॅक्स घेते पुढील काही काळासाठी सूट देणे, पर्यावरणाचा न्हास होणार नाही

याची दक्षता घेणे, छोटे उद्योग धंदे नियमाला बांधील ठेऊन सुरु करण्यास परवानगी देणे. सर्वात महत्त्वाचे म्हणजे लॉकडाऊन काळात शासनाचे नियम पाळून सहकार्य करावे म्हणजे येणाऱ्या संकटापासून आपली सुटका होईल व आपण कोरोनाला हरवू. अशा प्रकारे उपाययोजना करून शासन व डब्ल्यूएचओच्या दिशा निर्देशानुसार प्रत्येकाने वर्तन करून त्यावर विजय मिळवून भारतातील जनजीवन पुन्हा पूर्वपदावर येईल यात माझ्या मनात शंका नाही.

कोविड-१९ : वास्तविकता आरोग्य-प्रतिकारक्षमता-उपाययोजना

दीपक येवले

संख्याशास्त्र विभाग,
रामकृष्ण मोरे कॉलेज, आकुर्डी, पुणे

कोरोना विषाणू आहे काय ?

कोविड-१९ हा नवीन विषाणू आहे. मात्र, हा विषाणू त्याच कोरोना कुटुंबातला आहे ज्याचा शोध डॉ. जून अल्मेडा यांनी १९६४ साली लंडनच्या सेंट थॉमस हॉस्पिटल मधल्या प्रयोगशाळेत लावला. डॉ. अल्मेडा यांनी डॉ. डेव्हिड टायरेल यांच्या सोबत सर्दीमुळे नाकातून गळणाऱ्या द्रवाचे अनेक नमुने गोळा केले होते आणि त्यांच्या टीमला जवळपास सर्वच नमुन्यांमध्ये साध्या सर्दी-पडशात आढळणारे विषाणू दिसत होते. मात्र, यातला एक नमुना ज्याला B0814 असं नाव देण्यात आलं होतं, तो इन्फ्लुएंझासारखा दिसत असला इतर सर्व नमुन्यांपेक्षा वेगळा होता. हा नमुना १९६० साली बोर्डिंग स्कूलमधल्या एका विद्यार्थ्याकडून घेण्यात आला होता. डॉ. जून अल्मेडा यांना याच विषाणूसारखे कण त्या आधी उंदरांना होणारा हिपॅटायटिस आणि कॉंबड्यांना होणाऱ्या संसर्गजन्य ब्राँकायटिसमध्ये दिसले होते. या विषाणूची उंच-सखल रचना बघूनच डॉ. टायरेल, डॉ. अल्मेडा आणि सेंट थॉमस मेडिकल संस्थेचे

प्राध्यापक टोनी वॉटरसन यांनी या विषाणूला 'कोरोना' हे नाव दिलं. २००७ साली डॉ. जून अल्मेडा यांचा मृत्यू झाला. त्या वेळी त्या ७७ वर्षांच्या होत्या.^१

कोरोना विषाणूचे अनेक प्रकार आहेत. मात्र, यापैकी केवळ सहा प्रकारच्या विषाणूंची माणसाला बाधा होऊ शकते. मात्र, नव्या विषाणूचा शोध लागल्यानंतर संक्रमित होणाऱ्या कोरोना विषाणूची संख्या आता सात झाली आहे.

कोरोनाची लक्षणे -

कोरोना व्हायरस थेट फुफ्फुसांवर हल्ला करतो - एक तर ताप किंवा कोरडा खोकला. यापैकी काहीही झालं तरी श्वास घेण्यास त्रास होऊ लागतो. मात्र हा खोकला काही थांबत नाही. असंही होऊ शकतो की तासंतास खोकतच आहात, किंवा दिवसातून तीन-चार वेळा सातत्याने खोकत आहात. जेव्हा ताप येतो तेव्हा शरीराचं साधारण तापमान ३७.८ सेल्सियसपेक्षा जास्त असू शकतं. यामुळे जरा कणकण वाटू शकते, थंडी वाजू शकते किंवा थरथरल्या सारखं ही वाटू शकतं.

याची लक्षणं दिसायला कधी पाच दिवस लागू शकतात

तर कधी त्याहून जास्त. WHO नुसार हा व्हायरस आपले परिणाम शरीरात दाखवण्यास १४ दिवससुद्धा घेऊ शकतो. यालाच इनक्युबेशन पिरियड म्हणतात.

अमेरिकेच्या सेंटर फॉर डिसीज कंट्रोलने दिलेल्या ताज्या माहितीनुसार खालील पैकी लक्षणे ही कोरोनाची होय.

- ताप किंवा थंडी वाजणे, थरथरणे, स्नायूंमध्ये दुखणे, डोकेदुखी, खोकला किंवा घसा खवखवणे, चव न कळणे किंवा वास न येणे.

कोरोना विषाणूचा प्रसार कसा होतो ?

काही संशोधनांमध्ये सर्व ऋतूंमध्येच कोरोनाचा जगभरात फैलाव होत असल्याचा दावा करण्यात आलाय. त्याच पार्श्वभूमीवर आपण बघूया व्हायरसचा प्रसार कसा होतो.

एखादी कोरोनाबाधित व्यक्ती शिकली किंवा खोकली तर नाका-तोंडातून एका वेळला किमान ३००० शिंतोडे बाहेर पडतात. या शिंतोड्यांमध्ये कोट्यवधी कोरोना व्हायरस प्रोटीनच्या आवरणामध्ये सुरक्षित असतात.

अमेरिकन नॅशनल इंस्टिट्यूट ऑफ हेल्थने केलेल्या अभ्यासानुसार व्हायरस सूक्ष्म थेंबामध्ये कमीतकमी तीन ते चार तास जिवंत राहू शकतात. डोळ्यांना न दिसणारे हे थेंब हवेतही काही वेळासाठी तरंगू शकतात.

यातला एखादा थेंब लाकडावर पडला तर त्यातला व्हायरस २४ तासाहून अधिक वेळ जिवंत राहू शकतो. प्लास्टिक आणि स्टेनलेसस्टीलवर थेंब पडला तर तो चक्रे दोन ते तीन दिवसांसाठी सक्रिय राहू शकतो, म्हणजे कोरोनाग्रस्त माणूस तोंडावर हात धरून शिकला आणि त्याने त्या हाताने दरवाजा उघडला. त्याच हँडलला तुम्ही दुसऱ्या दिवशी हात लावला तरी दुसऱ्यास लागण होऊ शकते.

मृत्यूचा धोक किती ?

जागतिक आरोग्य संघटनेने (WHO) सुमारे ६५ हजार रुग्णांचा अभ्यास करून तयार केलेल्या आकडेवारीनुसार -

- ६ टक्के रुग्ण चिंताजनक परिस्थितीत पोहोचतात- म्हणजे त्यांची फुफ्फुसं निकामी होतात, त्यांना इतर संसर्ग होतात, अवयव निकामी होतात आणि मृत्यूचा धोका ओढवतो.

- १४ टक्के रुग्णांमध्ये गंभीर लक्षणं दिसतात - श्वास घेण्यास त्रास होतो इत्यादी.
- तर सुमारे ८० टक्के रुग्णांमध्ये सौम्य लक्षणं दिसतात - जस की ताप, खोकला किंवा न्युमोनियाची लक्षणं

आतापर्यंतच्या आकडेवारीवरून अस लक्षात येतं की ज्यांना आधीच कुठला ना कुठला आजार आहे-जसं की दमा, मधुमेह, उच्च रक्तदाब, हृदयविकार-त्यांना या रोगाची लागण होण्याची जास्त शक्यता आहे. आकडेवारी असंही सांगते की पुरुषांच्या जीवाला महिलांपेक्षा जास्त धोका आहे.

कोरोनाचा प्रथम रोगी चीनमधील वुहान शहरात ३१ डिसेंबर २०१९ रोजी आढळला. जागतिक आरोग्य संघटनेने ११ फेब्रुवारी २०२० रोजी ह्या रोगास कोव्हिड १९ हे नाव दिले व त्यास वैश्विक महामारी असे घोषित केले.

१३ मे २०२० अखेर जगभरात कोरोनाबाधित रुग्णांची संख्या ४३,९३,१९३ एवढी झाली आहे. आतापर्यंत १६,३३,९०६ रुग्ण कोरोनाच्या संसर्गातून बरे होऊन घरी परतले आहेत. तर २,९७,३९५ रुग्णांचा मृत्यु झालेला आहे. मृत्यु दर प्रमाण ६.७७% आहे.

१३ मे २०२० अखेर भारतातील कोरोनाबाधित रुग्णांची संख्या ७८,०४१ एवढी झाली आहे. आतापर्यंत २६,२३५ रुग्ण कोरोनाच्या संसर्गातून बरे होऊन घरी परतले आहेत. तर २५५१ रुग्णांचा मृत्यु झालेला आहे. मृत्यु दर प्रमाण ३.२७% आहे.

१३ मे २०२० अखेर राज्यातील कोरोनाबाधित रुग्णांची संख्या २५९२२ एवढी झाली आहे. आतापर्यंत ५५४७ रुग्ण कोरोनाच्या संसर्गातून बरे होऊन घरी परतले आहेत. तर ९७५ रुग्णांचा मृत्यु झालेला आहे. मृत्यु दर प्रमाण ३.७६% आहे.

कोरोनाचे सर्वाधिक रुग्ण हे अमेरिकेत आहेत. अमेरिकेत १४,१७,३९८ पेक्षा जास्त लोकांना कोरोनाचा संसर्ग झाला आहे, तर मृतांचा आकडा ८३,९८० आहे. तर १ लाख लोकसंख्येच्या तुलनेत मृत्यु दर प्रमाण २५.९% आहे.^२

कोरोना व्हायरस : लहान मुलांना कोविड-१९ चा धोका किती ?

- नव्या कोरोना व्हायरस संबंधात जे संशोधन नव्याने पुढे आलंय त्यात असं आढळलं की लहान मुलांना याची लागण होण्याचं प्रमाण कमी आहे असलं तरी त्यांना याची लागण होणारच नाही असं नाही.
- फेब्रुवारी महिन्यात चीनमध्ये केलेल्या एका सर्वेक्षणात लक्षात आलं की त्यावेळी तिथे लागण झालेल्या ७२३१४ पेशंटपैकी फक्त २ टक्के पेशंट

हे १९ वर्ष वया खालील होते. तर अमेरिकेत याच काळात केलेल्या ५०८ लोकांच्या सर्वेक्षणात आढळलं की १९ वर्ष वया खालच्या वयोगटात एकाचाही मृत्यू या रोगाने झाला नव्हता तर फक्त १ टक्के मुलांना दवाखान्यात अॅडमिट करावं लागलं होतं.

हॅम्प्टन चिल्ड्रन्स हॉस्पिटल मधले तज्ज्ञ ग्रॅहम रॉबर्टस सांगतात की, कोव्हिड-१९ ची लागण झालेल्या लहान मुलांच्या श्वसन संस्थेच्या वरच्या भागावर म्हणजे नाक, तोंड आणि घशावर परिणाम होतो, त्यामुळे त्यांच्या सर्दी सारखी लक्षणं दिसतात. पण व्हायरस त्यांच्या श्वसन संस्थेच्या खालच्या भागात म्हणजेच श्वासनलिका, फुफ्फुसं आणि छातीत पोहचत नाही त्यामुळे न्युमोनिया, श्वास घ्यायला त्रास किंवा इतर जीवघेणी परिस्थिती उद्भवत नाही. सहसा लागण झालेल्या लहान मुलांमध्ये गंभीर स्वरूपाची लक्षणं दिसत नाहीत तसंच त्यांना प्रौढां इतका त्रास ही होत नाही.

ज्येष्ठ नागरिकांच्या तुलनेत लहान मुलांना कमी धोका का ?

हा व्हायरस इतका नवा आहे की याबद्दल फारसं काहीच माहीत नाही. रॉबर्टस सांगतात. एक असू शकतं की या व्हायरसला पेशीत शिरण्यासाठी पेशीच्या पृष्ठभागावरच्या प्रोटीनची गरज असते. कोरोना व्हायरस ACE-2 या एन्झाइमचा रिसेप्टर म्हणून वापर करून फुफ्फुसात शिरतात. लहान मुलांच्या श्वसन संस्थेच्या खालच्या भागात मोठ्यांपेक्षा कमी ACE-2 इन्झाइम असतात. त्यामुळे त्यांचा कोव्हिड-१९ श्वसन संस्थेच्या वरच्या भागातच मर्यादित राहातो.

नवजात अर्भकांना जास्त धोका -

चिनी संशोधकांनी केलेल्या संशोधनानुसार नवजात अर्भकांना कोव्हिड-१९ चा धोका असतो. कोव्हिड-१९ चं संक्रमण झालेल्या १० पैकी एका अर्भकामध्ये गंभीर लक्षणं दिसत असली तरी वय वाढल्यानंतर हे प्रमाण फारच कमी होतं. ३-५ या वयोगटातल्या संक्रमण झालेल्या १०० पैकी फक्त ३-४ मुलांमध्ये गंभीर लक्षणं दिसून आली.^३

शासनाच्या उपाययोजना -

लॉकडाऊन - हा आकडा वाढतच असल्यामुळे कोरोना व्हायरसचा प्रसार रोखण्यासाठी सर्वत्र लॉकडाऊन आहे.

कोरोना व्हायरसची देशभरातील जिल्हा निहाय स्थिती दर्शविणारी यादी केंद्र सरकारने १ मे रोजी जाहीर केली आहे. ही यादी दर आठवड्याला अपडेट केली जाणार आहे.

प्रत्येक जिल्ह्यात असलेल्या रुग्णांची संख्या, ती संख्या किती दिवसांत दुप्पट होतेय (डब्लिंगरेट), टेस्टिंगचं प्रमाण आणि व्याप्ती तसंच तज्ज्ञांचं निरीक्षण, या निकषांद्वारे सर्व

जिल्ह्यांची रेड, ऑरेंज आणि ग्रीन झोनमध्ये विभागणी करण्यात आली आहे.

मेनुसार राज्यातले झोन्स -

रेड झोन म्हणजे असा जिल्हा, तालुका किंवा महापालिका क्षेत्रात मोठ्या संख्येने कोरोनाचे रुग्ण आढळून आले असतील. या जिल्ह्यांमध्ये कोरोनाबाधितांची संख्या ४ दिवसांपेक्षा कमी कालावधीत दुप्पट होतेय.

ऑरेंज झोन म्हणजे असे जिल्हे, ज्यात गेल्या १४ दिवसात एकही नवीन कोरोनाबाधित रुग्ण आढळून आलेला नाही.

तर **ग्रीन झोन** म्हणजे असे जिल्हे, ज्यामध्ये कोरोनाचा एकही रुग्ण नाही किंवा गेल्या २१ दिवसात एकही नवीन रुग्ण आढळून आलेला नाही.

भारत सरकारच्या क्रॉटाईनबाबत सूचना -

क्रॉटाईनबाबत केंद्रसरकारच्या आरोग्य विभागाने ही परिपत्रक जारी केले आहे. क्रॉटाईन कसं व्हावं? त्यासाठीचे मार्गदर्शक पत्रक सरकारकडून जाहीर करण्यात आलंय. त्यानुसार,

- क्रॉटाईन राहण्यासाठी सांगितल्यावर संबंधित व्यक्तीने हवेशीर बंद खोलीत रहावं. शक्यतो एकटं रहावं, कुटुंब सदस्य असल्यास त्याने १ मीटर पर्यंत अंतर ठेवणे गरजेचे आहे. शक्यतो स्वतंत्र शौचालय वापरावं.
- घरात फिरण्यावर बंधन घाला, कोणत्याही सार्वजनिक कार्यक्रमांना जाऊ नका.
- सर्जिकल मास्क वापरावं, दर ६-८ तासाने सर्जिकल मास्क बदलावे.
- मास्कचे विघटन करण्यासाठी बीच सोल्यूशन (५%) अथवा सोडियम हायपोक्लोराईट (५%) वापरून मास्क डिसइन्फेक्ट करावं. नंतर ते जाळावं अथवा पुरावं, वापरलेलं मास्क हे संक्रमित असू शकतं.
- केवळ डॉक्टरांनी परवानगी दिलेली व्यक्तीच क्रॉटाईन असलेल्या व्यक्तीशी संपर्क करू शकते.
- क्रॉटाईन व्यक्तीचे कपडे वेगळे ठेवा. त्यांची खोली, शौचालय ब्लीचसोल्यूशन अथवा फेनॉलिक सोल्यूशनने साफ करा.

कोरोना व्हायरस उन्हाळा सुरू झाल्यावर आटोक्यात येईल का ?

वाढत्या तापमानाचा कोरोना विषाणूवर परिणाम होण्याची शक्यता पूर्णपणे मावळली आहे, कारण कोरोना व्हायरसचा

जगभरात मोठ्या प्रमाणावर फैलाव झालाय.

भारतात उन्हाळा सुरू होऊन आता महिना उलटला आहे, मात्र कोरोनाचा संसर्ग कमी होण्याऐवजी वाढतच चाललाय.

थंड आणि कोरड्या ठिकाणी कोरोना रुग्णांच्या संख्येत झपाट्यात वाढ झाल्याचं संशोधनात आढळून आलंय. ज्या देशांमध्ये कोरोनाचे रुग्ण कमी संख्येने आढळून आले, त्याच्या तुलनेत कमी तापमान असलेल्या देशांमध्ये १० मार्चपर्यंत कम्युनिटी ट्रान्समिशनच्या माध्यमातून कोरोनाचा मोठा फैलाव झाल्याचं एका संशोधनातून समोर आलंय.

दुसऱ्या एका संशोधनात चीनमधल्या ४० पेक्षा जास्त रुग्ण असलेल्या १०० शहरांमध्ये तापमान वाढल्यानंतर कोरोनाचा फैलाव कमी होत असल्याचा दावा करण्यात आलाय.

कोरोना व्हायरस आता जागतिक आरोग्य संघटनेच्या अंतर्गत असलेल्या सर्व भागांमध्ये पसरला असून शीत, कोरडा, उष्ण आणि दमट अशा सर्व वातावरणात त्याची वाढ होत असल्याचं लंडन स्कूल ऑफ हायजिन अँड ट्रॉपिकल मेडिसीनच्या संशोधकांनी म्हटलंय.

कोणताही विषाणू हा ६०-७० डिग्री सेल्सियसपर्यंत नष्ट होत नाही. तेवढं तापमान उन्हाळ्यात बाहेरही नसतं आणि आपल्या शरीराच्या आत तर अजिबात नसतं.✕

तापमानाच्या भरवशावर बसू नका!

कोरोना व्हायरसजगभरात १८० हून जास्त देशांमध्ये पसरला आहे. यात ग्रीनलँडसारखे थंड प्रदेश आणि आखातामधले देश एक सारखेच या रोगाने ग्रस्त आहेत. त्यामुळे कोरोना व्हायरसवर भारतीय उन्हाळ्याचा फरक पडेल, अशी आशा बाळगायला सध्या तरी काही आधार नाहीये. त्याबद्दल जगभरात संशोधन सुरू आहे.

पण मग लॉकडाऊन कधी उठणार ?

सध्यादेशात १७ मेपर्यंत लॉकडाऊन असला तरी रुग्णांची वाढती संख्या पाहता काही हॉटस्पॉट्समध्ये लॉकडाऊन शिथिल होण्याची शक्यता फारच कमी आहे. पण कामकाज बंद ठेवणं, संपूर्ण शहर अशी बंदिस्त ठेवणं दीर्घ काळ परवडणारं नाही, हे स्पष्टच आहे. यामुळे प्रचंड मोठं आर्थिक आणि सामाजिक नुकसान होतच आहे. त्यामुळे सरकारांना आता एक्झिट स्ट्रॅटजीचा विचार करावा लागणार आहे.

मग यातून बाहेर पडण्याचा मार्ग काय ?

भारतात अनेक केंद्रीय तसंच राज्य सरकारमधले नेते आता स्पष्ट संकेत देत आहेत की अर्थव्यवस्थेला चालना देण्यासाठी कामकाज सुरू करावं लागणार आहे. हे एक प्रचंड मोठं वैज्ञानिक आणि सामाजिक आव्हान असणार आहे.

या संकटातून बाहेर पडण्याचे तीन मार्ग असू शकतात-

- लशीकरण.
- संसर्गामुळे लोकसंख्येतल्या काही जणांमध्ये रोगप्रतिकार शक्ती निर्माण करणे
- किंवा या साथीमुळे आपल्यात आणि समाजाच्या सवयींमध्ये कायमचा बदल होईल.

मोठ्या प्रमाणावर टेस्टिंग आणि बाधितांचं कॉन्टॅक्ट ट्रेसिंग, हे प्रामुख्याने करण्याची गरज आहेच. शिवाय, कंटेनेमेंट झोन्समध्ये नियमांचं काटेकोरपणे पालन होत आहे, याची दक्षता प्रशासनाला घेणं आवश्यक आहे.

कोरोना विषाणूचा प्रसार खोकला किंवा शिकेतून बाहेर पडणाऱ्या तुषारांमधून किंवा असे तुषार पडलेल्या जागी स्पर्श केलेला हात नाका-तोंडाला लागल्यानं होत असल्याचं आतापर्यंतच्या संशोधनातून दिसून आलं आहे.

तसंच गर्दीच्या ठिकाणी अशा संसर्गाचा धोका जास्त असल्याचं तज्ज्ञांनी वारंवार सांगितलं आहे.

कोरोनाचा संसर्ग होऊ नये, यासाठी खालील गोष्टी नियमितपणे करा -

- आजारी व्यक्तींच्या फार जवळ जाऊ नका.
- हात न धुता तोंड, नाक, डोळे, कान यांना स्पर्श करू नका.
- शिकताना आणि खोकलताना टिशू पेपर वापरा. वापरून झाल्यावर तो कचरा पेटीत टाकून हात स्वच्छ धुवा.
- साबणाने नियमित हात धुवा.

मास्क वापरल्यामुळे खरंच कोरोना रोखता येता का, याबाबत WHO अजूनही खात्रीशीरपणे सांगू शकत नसल्याचं म्हणतंय. पण तोवर गर्दीच्या ठिकाणी जाणार असाल तर तो नक्कीच वापरा.

निरीक्षण -

१. लस महत्त्वाची आहे कारण हा कोरोना व्हायरस अत्यंत तेजीने पसरतो आहे आणि जगभरात लाखो लोकांना आतापर्यंत हा रोग झाला आहे. लाखोंचा मृत्यू सुद्धा झाला आहे. त्यामुळे जर ही लस मिळाली तर लोकांच्या रोगप्रतिकार यंत्रणेला एखाद्या परकीय शक्तीविरोधात लढण्यास मदत मिळेल, जेणे करून ते आजारी पडणार नाही. सध्या जगात ज्या ८० टीम्स कोरोना व्हायरसवर लस तयार करण्याचा प्रयत्न करतायत, त्यातल्या चार गटांनी याच्या चाचण्या सुरू केल्या आहेत.
२. पुण्यातील एनआयव्ही व सिरम इन्स्टिट्यूट ही अग्रभागी आहे.

३. प्लाझ्मा थेरपी माध्यमातूनही रुग्ण बरी करण्याची चाचणी सुरू आहे. पण सगळं काही सुरळीत पार पडलं तरी लस यायला २०२१ उजाडेल, कोरोना विषाणू जगभरात ज्या वेगाने पसरतोय ते पाहत हा कालावधी फार मोठा आहे. त्यामुळे लशीची वाट पाहणं याला 'स्ट्रॅटेजी' म्हणता येणार नाही, ही स्ट्रॅटेजी नाही, असं एडिंबर्ग विद्यापीठातले संसर्गजन्य आजारांचा अभ्यास करणारे प्राध्यापक मार्क वुलहाऊस सांगतात.

४. त्याकरिता स्वतःची रोग प्रतिकारक्षमता वाढविणे, निरोगी राहणे हा एकमेव पर्याय आहे.

नैसर्गिक रोग प्रतिकारक्षमता -

- ६० वर्षांपेक्षा ज्यांचं वय जास्त आहे
- ज्यांचं अवयव प्रत्यारोपण झालंय
- कॅन्सरसाठी किमोथेरपी किंवा रेडिओथेरपी घेणारे
- प्रतिकारशक्ती कमी करणारी औषध घेणारे
- गरोदर स्त्रिया ज्यांना हृदयाशी संबंधित आजार आहेत

सिस्टिकफायब्रोसिस, सिव्हियर अस्थमा किंवा श्वसनाशी संबंधित गंभीर आजार असणारे

जास्त वय आणि वरच्यापैकी कोणताही आजार असणाऱ्यांसाठी कोव्हिड जीवघेणा ठरू शकतो. मग तरुणांनी ही महिनोन्महिने घरात बसून राहायची गरज आहे का, असा प्रश्न आता जगभरच्या तज्ज्ञांना पडलाय.

या धोरणा अंतर्गत जर तुमच्या घरात वयोवृद्ध किंवा आजारी व्यक्ती असेल आणि तुम्ही घराबाहेर जात असाल तर शक्यतो तुम्ही वेगवेगळ्या खोल्यांमध्ये राहावं. शक्य असल्यास वेगळं बाथरूम वापरावं. टॉवेलस वेगळे असावेत. भांडी वेगळी असावीत. एकमेकांच्या शक्यतो समोरासमोर येऊ नये. घरात हवा खेळती असावी. खिडक्या उघड्या ठेवाव्यात.

जीवनशैली बदल योजना (डाएटप्लॅन) -

१. कोरोनाबाधित रुग्णांच्या अहवालानुसार मधुमेही व्यक्तींमध्ये कोरोनाची लागण त्वरेने होत असल्याचे दिसून आलेले आहे. त्याकरिता खालीलप्रमाणे जीवनशैलीचा अंगिकार करणे क्रमप्राप्त आहे.

२. दिवसातून दोनदाच जेवा - आपल्या कडक भुकेच्या वेळेसच जेवा. ह्या वेळा प्रत्येक व्यक्तीसाठी वेगवेगळ्या असू शकतात.

सर्व गोष्टी ५५ मिनिटांच्या कालावधीत खा किंवा प्या (औषधेसुद्धा, फक्त थायराईडच्या गोळ्या सोडून, त्या कधीही घेऊ शकता)

अ) सर्व गोड पदार्थ टाळा - गोड पदार्थ म्हणजे साखर,

गूळ, मध किंवा साखरेचे पर्यायी वापरून बनवलेले पदार्थ

ब) गोड फळे टाळा - गोड फळे म्हणजे आंबा, चिकू, द्राक्षे इत्यादी. लिंबू वर्गीय फळे जेवणाच्या सुरवातीला खा. (गोड फळे ओळखायला कठीण वाटत असल्यास सुरुवातीचे तीन महिने फळे खाणे टाळा).

क) जेवणातील कर्बोदकांचे प्रमाण कमी करा, बंद नाही. उदा. आता ३ पोळ्या खात असल्यास त्या २ करा (गहू, तांदूळ, ज्वारी, बाजरी इत्यादी धान्यापासून बनवलेले पदार्थ) प्रथिनांचे प्रमाण वाढवा. (अंकुरित कडधान्ये, चीझ, पनीर, सोयाचंकसू, शेंगदाणे इ.)

सामिष खाणारे अंड(बलकासाहित), मटण, चिकन व मासे खाऊ शकतात.

३) दोन जेवणांच्या मधल्या काळात घेऊ शकत असलेल्या गोष्टी (सर्व साखर/गूळ/मध/साखरेचे पर्यायी पदार्थ यांच्याशिवाय) कितीही प्रमाणात :

- पाणी
- पातळ ताक प्रमाण - १० ते १५ मिली दह्याचे २०० मिली ताक (जर उच्च रक्तदाबाचा त्रास नसेल तर चवीपुरत मीठ घालू शकता)
- ब्लॅकटी / ग्रीनटी

लक्षात घ्या, फक्त पाणी, हे केव्हाही चांगले!

४) जेवणाच्या वेळा त्याच ठेवा. जास्तीतजास्त १५ ते २० मिनिटांचा फरक चालेल.

५) केवळ अपरिहार्य कारणांसाठी आहार योजनेत खंड पडू देऊ शकता. दुसऱ्या दिवसापासून आहार योजनेचे तंतोतंत पालन सुरू करा.

६) व्यायाम अनिवार्य आहे : असा कोणताही व्यायाम ज्याने तुमच्या हृदयाचे ठोके वाढतील, तो चालेल. मग तो चालणे, सायकलिंग किंवा पोहोणे असू शकेल, ४५ मिनिटांत कमीतकमी ४.५ किमी चालणे व्हायला हवे. रोज एका दमात कमीतकमी ४५मिनिटे, असा आठवड्यातून किमान ५ दिवस व्यायाम करावा.

७) तुमचे जास्तीतजास्त आदर्श वजन जाणून घ्या : जास्तीतजास्त वजन = सेंमीमध्ये उंची - वजा १००

उदा. जर उंची १७० सेंमीअसेल, तर१७० - १०० = ७० किलो, हे जास्तीतजास्त आदर्श वजन असेल.

एक असे जादुई सूत्र जे अतिरिक्त इन्सुलिन स्त्रावण नियंत्रित करते व अशा ठिकाणचे वजन/मेद घटवते ज्या ठिकाणी ते अतिरिक्त आहे. शरीराची इन्सुलिनसाठीची संवेदनशीलता वाढवून ते मधुमेह प्रतिबंध किंवा नियंत्रण करते.^५

आयुष मंत्रालयाकडून (Ayush Ministry) आरोग्याची काळजी घेण्या संदर्भात काही मार्गदर्शक तत्त्वे (Self Care

Guidelines) जारी करण्यात आली आहेत. जेणे करून नागरिकांना श्वसना संबंधित जीवघेण्या आजारांपासून स्वतःचा बचाव करण्यास मदत मिळले. आयुष मंत्रालयाकडून काही सामान्य पद्धती सुचवण्यात आल्या आहेत, ज्यांचा तुम्ही आपल्या दैनंदिन जीवनात सहजरित्या समावेश करू शकता. या उपचारांमुळे आपलं शरीर निरोगी राखण्यासाठी आणि रोग प्रतिकारकक्षमता वाढवण्यासाठी मदत होईल.

गरम पाणी प्या -

- दिवस भरभरपूर प्रमाणात पाणी प्या. साध्या पाण्याऐवजी गरमच पाणी प्यावे.
- दिवसभरात कधीही कमीतकमी ३० मिनिटांसाठी योगासने, प्राणायाम आणि ध्यानधारणा करणे आवश्यक आहे.
- हळद, जीरे, धने, लसूण यांचा स्वयंपाकामध्ये अवश्य समावेश करा.
- बदलत्या हवामानानुसार होणाऱ्या आरोग्या संबंधित आजारांविरोधात लढण्यासाठी आणि रोग प्रतिकारकक्षमता वाढवण्यासाठी या उपचारांमुळे तुम्हाला मदत मिळेल. कोरोना व्हायरसवरील उपाय म्हणून या औषधोपचार प्रक्रियांकडे पाहू नका.

योगासने - सेतु बंधासन, वृक्षासन, ताडासन, त्रिकोणासन, बालासन, सूर्यनमस्कार, १मिनीट श्वास रोखणे, १ मिनीटांत १०० वेळा ब्रेथरेट करणे, १ मिनीटांत १०० वेळा कपालभाती करणे.

इतर उपाययोजना - कोरोना व्हायरस हा पूर्णतः नष्ट होऊ शकणार नाही. त्याकरिता त्याचेसमवेत आपण जगायला शिकले पाहिजे. त्याअनुषंगाने उपाययोजना करणे आवश्यक आहे. ५० दिवसांच्या लॉकडाऊनमुळे अर्थव्यवस्थेवर गंभीर परिणाम झालेला आहे. अर्थव्यवस्थेसह जीवनचक्र सुरळित आणण्यासाठी प्रामुख्याने २४ तासांचा दिवस करणे आवश्यक आहे.

लॉकडाऊनमध्ये शिथिलता देऊन प्रतिबंधित क्षेत्रांना वगळून, सोशल डिस्टेंसिंग व सर्व रोग प्रतिकारक क्षमतांचा अवलंब करित जीवनचक्र सुरू होणे गरजेचे आहे.

- सम विषम धरतीवर आधारित वाहनांना परवानगी द्यावी.
- आय. टी. इंडस्ट्रीजला दिवसपाळी ऐवजी रात्रपाळीस परवानगी द्यावी. तसेच येण्याजाण्याच्या वेळा ठरवून द्याव्यात. दोन कंपनीमधील कर्मचाऱ्यांच्या कामावर रूजू होण्याच्या वेळेत एक तासाचे अंतर असावे. ५० टक्केच हजेरी असावी. तसेच वर्क फ्रॉम होम ही

- संकल्पना कायम स्वरूपी राबवावी.
३. वाहतूक व गर्दी टाळण्यासाठी शासकीय कार्यालये, बँक, पोस्ट, इतर सरकारी यंत्रणा यांच्या सुध्दा कामकाजाच्या वेळा एकमेकांना पुरक असतील अशा पध्दतीने अवलंबल्या जाव्यात. उदा. बँकांनी स. ८ ते सायं. ७ पर्यंत वेगवेगळ्या पध्दतीने उघडण्याच्या व बंद होण्याच्या वेळा निर्धारित कराव्यात. रविवार हा सुटीचा दिवस न पकडता आठवड्यातून कोणताही एक दिवस सुटीचा करावा. रोटेशन पध्दतीने तो बदलत जावा.
 ४. व्यावसायिक प्रतिष्ठान, उद्योग व्यवसाय, दुकाने इ. सर्वांची उघडण्याची व बंद होण्याची वेळ वेगवेगळी असावी.
 ५. दवाखाने, औषधी दुकाने व अत्यावश्यक सेवांना यातून वगळावे.
 ६. बसेस, रेल्वे व विमान वाहतूक ह्या व्यवस्था सोशल डिस्टेंसिंग पध्दतीचा अवलंब करून सुरू करावा. फक्त ऑनलाईन बुकींगचीच सोय उपलब्ध

असावी.

७. खाजगी वाहने, रिक्षा, टॅक्सी इ.ना पण रोटेशन पध्दतीने परवानगी द्यावी.
८. शाळा, महाविद्यालये ऑगस्ट अखेर पर्यंत सुरू करू नयेत. विद्यार्थ्यां व्यतिरिक्तची कामे सुरू करावीत. ऑगस्टपूर्वी विद्यार्थ्यांना ऑनलाईन शिक्षण द्यावे.
९. सार्वजनिक कार्यक्रमांना किमान ६ महिने मज्जाव घालावा.

निष्कर्ष -

कोरोना व्हायरसचा समूळ नायनाट करणे हे अशक्यप्राय आहे. रोगप्रतिकार क्षमता वाढविणे, निरोगी राहण्यासाठी मार्गदर्शक तत्वांचा अवलंब करणे, सुरक्षित अंतर ठेवून जगरहाटीच्या चक्रात धीरोदात्तपणे वाटचाल करणे.

संदर्भ ग्रंथ :

१. <https://www.BBC.com/International/52315031>
२. जॉच हॉपकिन्स विद्यापीठ, राष्ट्रीय सार्वजनिक आरोग्य विभाग
३. वर्ल्ड जनरल ऑफ क्लिनिकल पेडियाट्रिक्स
४. BBC Future
५. विनासायास वेटलॉस आणि मधुमेह प्रतिबंध-डॉ. जगन्नाथ दीक्षित

कोरोना महामारी लॉकडाउनमुळे शेतीक्षेत्रात आर्थिक वर्तमान व भविष्यकालीन परिणाम

शांताराम ताराचंद सोनवणे

कर्म. आ. मा. पाटिल कला, वाणिज्य, व कै. अण्णासाहेब
एन. के. पाटिल विज्ञान वरिष्ठ महाविद्यालय, पिंपळनेर
ता. साक्री जि. धुळे

प्रस्तावना -

भारत हा कृषीप्रधान देश आहे. ६५ ते ७०% लोक शेतीवर अवलंबून आहेत. आपल्या देशाची संस्कृती महान आहे. भारतीय संस्कृती ही मुलता: कृषी संस्कृती आहे. शेती व शेतकरी यातून ती विकसित झाली आहे. शेतकरी हा भारतीय समाजाचा सततचा प्राणवायु सांस्कृतिक घटक आहे. पंचभुता बरोबर शेतकऱ्याच्या श्रमाची एकरूपता होवून पोषक हिरवाई उदयाला आली. निसर्गाला कंठ फुटला, पंचमहाभुतांना सन्मान मिळाला. श्रमानेच ईश्वरविषयाची श्रद्धा जागवली. शेतकऱ्याने या धरतीमातेला वसुमती बनवले आहे. अशा प्रकारे भारतीय तत्वज्ञान शेतकऱ्यांच्या जगण्यातून श्रमातून उदयाला आले.

मानवी जीवनाबरोबर अनंत डोळ्याला न दिसणारे सुक्ष्म जीवहि धरतीमाता प्रत्येक सुक्ष्म जीवाला जगण्यासाठी विविध प्राण्यांच्या शरीरातजगण्याचा अधिकार हासुद्धा निसर्ग नियमच आहे. अर्थात यालाच तर सहजीवन म्हणतात. सर्व जीवसृष्टी जगच आहे. मानवीनिसर्ग हस्तक्षेपामुळे मानवामुळेच मानवावर संकट ओढवली आहेत. याचाच परिणाम जगबंद ७०० कोटि लोकसंख्या असणारी हि धरती माता आज केवळ एका प्राण्यांमधील एका व्हायरसमुळे बंद आहे. तो व्हायरस म्हणजे कोरोना (कोविड- १९) व्हायरस यापूर्वी ही मानव जात अस्तित्वात आल्यापासून आजपर्यंत हजारोवेळा अनेक प्रकारच्या रोगांच्या साथी येवून गेलेल्या आहेत. मानवाने त्या सर्वांवर मात करित आत्तापर्यंतचा प्रवास केलेला आहे.

जगावर असे अनेक संकट येवून गेली आहेत. त्यात १७२० मध्ये मार्सि लेप्लेग (Marshile Plague) नावाचा आजार येवून गेला. त्यात जगभरात ७ करोड जवळपास लोक बळी गेले होते. पुन्हा १८२० मध्ये भयानक महामारी उेश्रीर ह्या भयानक रोगाची प्रथम सुरवात बांग्ला देशातून झालेली होती, तर फैलाव थायलंड, इंडोनेशिया, फिलीपाईन, मध्य व पुर्व अफ्रीका, युरोप, रूस देशात हा रोग पसरलेला होता. यात सुमारे ८ लाख लोक बळी पडले होते. पुढील काळात १९२० मध्ये स्पैनिश फ्लु नावाचा भयानक व्हायरस नावाचा आजार आला. स्पेन या देशात हा आजार प्रखर तीव्र असल्यामुळे याला स्पैनिशफ्लु नाव पडले. ही महामारी युरोप, युनायटेड स्टेट आणि आशियाच्या काही भागात पसरला होता. यात

वाल्मिक भाऊराव शिरसाठ

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ता. साक्री जि. धुळे

जवळपास ५ करोड लोकांचा बळी गेला होता. या जागतिक महामारी आजाराने भारतातील जवळपास २ करोड लोकांचा बळी गेला होता.

आज डिसेंबर २०१९ पासून कोरोना व्हायरस (कोविड- १९) या जागतिक महामारीची सुरवात सर्वप्रथम चीनमधून सुरुझाली. अन अत्यंत जलदगतीने हा भयानक संसर्गजन्य व्हायरस जगभर हाहा म्हणता वाऱ्यासारखा पसरला. यामुळे सर्व जगाचे व्यवहार, दळणवळण थांबून अर्थव्यवस्था ठप्प झाली. ह्या आजारावर नियंत्रण मिळवण्यात अद्याप कोणत्याही देशाला यश मिळालेले नाही. परिणामी हतबल व भयानक तीव्रता पाहता सर्व देशात डेल्टावेपु च अंमल करण्यात आला. यामुळे ह्या आजाराच्या वाढत्या प्रादुर्भावामुळे जागतिक अर्थव्यवस्था कोलमडून पडली.

कोरोना व्हायरस (कोविड - १९) सुरवात -

२०१९ मध्ये कोरोना व्हायरसचा एक उपप्रकार चीनमधील वूहान शहरात आढळून आला. याला कोव्हिड-१९ असे नाव देण्यात आले. सुरुवातीस वुहान व आसपासच्या प्रदेशात पसरलेला हा विषाणू त्याच्या इतर उपप्रकारांपेक्षा अधिक तीव्रतेचा असून याने रोग्यांच्या मरण्याचे प्रमाण मोठे आहे. १३मार्च२०२० अखेर जगात १,३२,७५८ जणांना या आजाराची लागण झाली असून एकूण ४९५५ जणांचा मृत्यू झाला आहे. एकूण १२२ देशांमध्ये हा आजार पसरला आहे. चीनमधील हूबै प्रांतात या आजारामुळे सर्वाधिक बळी गेले आहेत. हूबै प्रांतातील वूहान शहरातून या विषाणूची लागण सुरू झाली. या आजारामुळे चीन देशात १३ मार्च २०२० अखेर ३१८० जणांचा बळी गेला असून ८० हजार ९९१ जणांना लागण झाली असल्याचे समोर आले आहे. जागतिक आरोग्य संघटनेने याबाबत माहिती जारी केली आहे. ६ एप्रिल २०२० अखेर जगात एकूण १२,१०,९५६ जणांना या आजाराची लागण झाली असून एकूण ६७,५९४ जणांचा मृत्यू झाला आहे. यापैकी युरोपीय देशांत ४९,४७९ तर अमेरिकेत ९,६८० मृत्यू झाले आहेत. ११ मे २०२० चे आकडेवारीनुसार जगभरात ही रुग्णसंख्या ४१,८६,८४१ तर मृत्यू २,८८,५ ६५ जगभरात बरे झालेल्या कोरोना व्हायरस रुग्णांची संख्या १४,१९,८९४ इतकी आहे. ह्या आकडेवारीत भर ही जागतिक चिंतेची बाब आहे...

भारतात कोरोना व्हायरसचा वाढता प्रादुर्भाव -

दिनांक २८ मार्च २०२० पर्यंत भारतातील कोरोना रोगाच्या रुग्णांचा आकडा ९१८ इतका आहे. भारतात एकूण १९ रुग्णांचा मृत्यू झाला आहे. ६ एप्रिल २०२० अखेर भारतात कोरोना रोगाच्या रुग्णांचा आकडा ४,०६७ इतका आहे. भारतात एकूण १०९ रुग्णांचा मृत्यू झाला होता. यात सातत्याने वाढ होताना दिसतेय. १० मे २०२० रोजीचे आकडेवारीनुसार coronavirus उद्रेकामुळे भारतात ही रुग्ण संख्या ६२ हजार झाली. असुन त्यात दिवसेंदिवस वाढ होत आहे.

महाराष्ट्रातील वाढता कोरोना व्हायरसचा प्रादुर्भाव

महाराष्ट्रामध्ये दिनांक २८ मार्च २०२० पर्यंत १८१ कोरोना रुग्ण आढळले होते. महाराष्ट्रामध्ये दिनांक २३ मार्च २०२० पर्यंत ५ रुग्णांचा मृत्यू झाला आहे. महाराष्ट्रातील इतिहासात अत्यावश्यक सेवा व सामग्री सोडून प्रथमच सर्व महत्त्वाची देवस्थाने बंद ठेवण्यात आली आहेत.

महाराष्ट्र राज्यात १२ मे २०२० रोजीचे आकडेवारीनुसार अखेर २४४२७ रुग्ण असून अनेकांचा coronavirus मुळे मृत्यू झाला आहे. यात आज वाढ होताना दिसत आहे. कोरोना आजाराने औषध नसल्यामुळे रोगावर नियंत्रण, संसर्जन्य वाढता प्रादुर्भाव टाळण्यासाठी काही उपाययोजना म्हणून शासकीयस्तरावर बंधनात्मक धोरणानुरूप उपाययोजना आखण्यात आल्यात यात संबंध देशभरात लॉक-डाउन डेल्झवुपेची घोषणा केली. भारतातील कोरोना व्हायरस फैलाव थांबविण्यासाठी प्रतिबंधक महत्त्वपूर्ण उपाययोजना पुढीलप्रमाणे सांगता येतील...

- क्वॉरंटीन
- बेकायदेशीर जमावबंदी
- संचारबंदी
- जनता कर्फ्यू

क्वॉरंटाईन -

क्वॉरंटाईन म्हणजे रोग किंवा कीटकांचा प्रसार रोखण्यासाठी लोक आणि वस्तूंच्या हालचालींवर प्रतिबंध लावणे. क्वॉरंटाईन पद्धती सहसा रोग आणि आजारपणाच्या बाबतीत वापरली जाते, यामध्ये ज्यांना संसर्जन्य रोगाचा धोका आहे पण ज्यांच्या वैद्यकीय निदानाची पुष्टी झालेली नाही, अशा लोकांच्या हालचाली प्रतिबंधित केल्या जातात. हा शब्द बऱ्याचदा वैद्यकीय विलगीकरणाला पर्याय म्हणून वापरला जातो. यात ज्या लोकांना संसर्जन्य रोगाची लागण झाल्याची पुष्टी झालेली आहे ते लोक निरोगी लोकांपासून वेगळे केले जातात.

बेकायदेशीर जमावबंदी -

शांततेत जाणीवपूर्वक त्रास न होता परस्पर हेतू असलेल्या लोकांच्या गटाचे वर्णन म्हणजे बेकायदेशीर जमाव किंवा जमावबंदी असे कायदेशीर म्हटले जाते.

संचारबंदी -

संचारबंदी सामान्य भाषेत कर्फ्यू ही अशी वेळ निर्दिष्ट करते जी विशिष्ट नियम लागू होते. थोडक्यात म्हणजे ज्यावेळेस व्यक्तींना त्यांच्या घरात राहण्याची किंवा घरी परत जाण्याची आवश्यकता असते. असा आदेश सार्वजनिक प्राधिकरणाद्वारे परंतु घरातील मालकांकडूनदेखील जारी केला जाऊ शकतो.

जनता कर्फ्यू -

जनता कर्फ्यू (जनतेची संचारबंदी) हा कोरोना व्हायरसच्या प्रसाराचा सामना करण्यासाठीचा प्रयत्न होता. मा. पंतप्रधान नरेंद्र मोदीसाहेब यांनी रविवारी, २२ मार्च २०२० रोजी सकाळी ७ते रात्री ९ वाजेपर्यंत स्वयं-ला दलेले 'कर्फ्यू' पाळण्याची भारतातील सर्व नागरिकांना विनंती केली. भारतातील कोरोना व्हायरस रोगाचा प्रसार कमी होण्यास मदत व्हावी, हा यामागचा उद्देश होता. २४ मार्च २०२० रोजी मा. पंतप्रधानांनी जाहीर केले की, भारत येते २१ दिवस पूर्ण-Lockdown पाळले या नंतर पुन्हा यात वाढ करून १७ एप्रिलपर्यंत वाढविण्यात आले. यानंतरही वाढते रुग्णांचे संख्येमुळे यात वाढ होण्याची शक्यता वाटते. हा Lockdown चा चौथा टप्पा असेल. भारतात महाराष्ट्र राज्यात कोरोना व्हायरस आजारामुळे रुग्णांची संख्या झपाट्याने वाढत असून ग्रामीण भागातही कोरोना व्हायरसने शिरकाव केला आहे. ही मोठी अडचण सर्वासमोरच आज उभी राहिली आहे. महाराष्ट्रात कोरोनाग्रस्त संख्या आजमितीस दि. १२/५/२०२० चे आकडेवारीनुसार २४४२७ इतकी झपाट्याने वाढलेली आहे.

Key Words - संशोधन विषयातील महत्त्वपूर्ण शब्द - कोविड-१९, Lockdown, कृषी, अर्थव्यवस्था, शेतकरी, जागतिक महामारी, कृषीतंत्रज्ञान

लेखाची उद्दिष्टे -

- Lockdown काळात कृषी क्षेत्रातील होणारे परिणाम अभ्यासणे.
- Lockdown काळात ग्रामीण भागातील शेती अर्थव्यवस्थेचा अभ्यास करणे.
- Lockdown काळात मानवी जीवनावर होणारे परिणाम अभ्यासणे.

संशोधन पद्धती -

प्रस्तुत संशोधनात संशोधकांनी / लेखकाने संशोधन अभ्यासासाठी दुय्यम साधनांचा वापर केला असून त्यात विविध शासकिय अहवाल, पुस्तके, मासिके, वर्तमानपत्र, तसेच शेतीतज्ञ, विविध संकेतस्थळे, शेतकरी बांधवांशी Video - Audio संवादातून तांत्रिक ज्ञानाचा वापर करून माहिती प्राप्त केली.

कोरोना व्हायरस Lockdown मुळे जगासमोर आलेले आर्थिक संकटाचे सावट -

कोरोना व्हायरसमुळे जगभरातील अर्थव्यवस्था धोक्यात आली आहे. जागतिक अर्थव्यवस्थेचं अनेक ट्रिलियन डॉलर्सचे नुकसान होण्याचा अंदाज आहे. संयुक्त राष्ट्रांच्या ताज्या अहवालात या गोष्टीसमोर आल्या आहेत. अहवालानुसार विकसनशील देशांना या परिस्थितीत मोठी समस्या भेडसावणार आहे, परंतु चीन यातून सावरू शकतो. असे काही तज्ञांचं मत आहे. कोरोना विषाणूमुळे होणारी आर्थिक घसरण आताही सुरूच आहे. येणाऱ्या काळात हे अधिक वेगाने वाढेल, ज्याचा अंदाज बांधणे कठीण आहे. सद्य परिस्थिती पाहता जगातील गरीब आणि विकसनशील देशांना आर्थिक मंदीवर मात करण्यासाठी सुमारे २ ट्रिलियन डॉलर्सची गरज लागेल असा अंदाज संयुक्त राष्ट्रांच्या व्यापार आणि विकास मंडळाने (यूएनसीटीएडी) व्यक्त केला आहे. विकसनशील देशांनाही परिस्थिती सामान्य होण्यासाठी २ वर्षांचा कालावधी लागू शकेल, असेही त्यात नमुद केलेल आहे.

कोरोना व्हायरस (coronavirus) महामारीमुळे भारतीय शेती अर्थव्यवस्थेत वर्तमान व भविष्यकालीन परिणाम -

भारतीय अर्थव्यवस्थेचा कणा समजली जाणारी शेती क्षेत्रातील शेतकऱ्यांना वर्तमानात गंभीर परिणामांचा सामना करावा लागत आहे. व भविष्यात गंभीर परिणामांना सामोरे जावे लागणार आहे. कोरोना (कोवीड१९) च्या महाभयंकर महामारीमुळे शेतकरी दुहेरी संकटात सापडला आहे. एकिकडे कोरोना आजाराची भयंकर धास्ती अन् दुसरीकडे त्याच्या जीवनावर विपरित परिणाम करणारे आर्थिक संकट..!

सध्या शेतकऱ्यांची आर्थिक स्थिती फार बिकट आहे. कोरोनामुळे आर्थिक परिस्थितीचा सामना अन् पुढे उभे असलेले आव्हान यातून मार्ग काढण्यासाठी सध्यातरी जरतरचे सावट आणि अनिश्चिततेचे ढग दाटून आले आहे. कोरोना (कोवीड१९) ची परिस्थिती हाताबाहेर गेली अन् Lockdown चा निर्णय लांबविला तर त्याचा सर्वात मोठा फटका शेतकरी वर्गाला बसत आहे. कोरोनाच्या भीषण संकटातून बाकीचे उद्योग व्यवसाय जैसैथे असतील कारण त्यांचा उत्पादन खर्च आणि प्रोडक्शनही थांबलेल आहे शिवाय त्यांचा माल नाशिवंत नाही. कोरोना (कोवीड-१९) नंतर ते पुन्हा जोमाने सक्रिय होतील. पण शेती आणि शेतीपूरक व्यवसायांना सावरायला अनिश्चित कालावधी लागणार आहे. हे शाश्वत वास्तव नाकारता येणार नाही.

कोरोना (कोवीड - १९) आणि Lockdown मुळे प्रचंड महागाई आणि बाजारपेठत अस्थिरता जाणवणार आहे. कोरोना (कोवीड - १९) चे परिणाम ग्रामीण भागात सध्या खूप मोठ्या प्रमाणात जाणवू लागले. गावबंदी झाली. त्यामुळे मजुर कोरोना व्हायरस भीतीने घरातच बसून राहिले. शेती काम करायला मजुरांचा तुटवडा निर्माण झाला. त्यामुळे खेळत्या

भांडवलाची कमतरता अन् मार्केट व्यवस्थेत निर्माण झालेली मंदी, वाढलेली बेरोजगारी, शेअरमार्केटची घसरणुंडी, देशाचा घसरलेला G. D. P. दर, आंतरराष्ट्रीय स्तरावर रूपयाचे घसरलेल मुल्यांकन, आर्थिकदृष्ट्या कमकुवत झालेला देश, नोटबंदीचे दुष्परिणाम. या सर्व गोष्टींचा विचार केला तर..कोरोना (कोवीड१९) च्या बिमारीने यात पुन्हा एकदा निगेटिव्ह भर टाकली आहे..!

शेतकऱ्यांना केंद्रस्थानी ठेवून शेतकरी विरोधी कायद्यांमध्ये बदल करून शेतकऱ्यांना मुख्य प्रवाहात आणण्यासाठी उच्च स्तरीय सरकारकडून बदल करणे अपेक्षित आहे...

कोरोनाचे भारतीय शेती अर्थव्यवस्थेत वर्तमान परिणाम -

दळणवळण व्यवस्था थांबली -

कोरोना व्हायरसमुळे जवळपास सर्वच वाहनांची चाके थांबली. रेल्वे विमान, सागरी वाहतुक पुर्णता बंद असल्यामुळे दळणवळण ठप्प झाले असून, कोट्यवधी रुपयांचे शेती क्षेत्राचे नुकसान होत आहे. अत्यावश्यक सेवांचे वाहने सुरु करण्याचे धोरण असले तरीही ग्रामिण भागातून चालकांना शहरापर्यंत येता येत नाही. परिणामी आयात निर्यात थांबली. बहुतांश वाहनचालक ग्रामीण भागात राहतात. सध्या ग्रामीण भागात अनेक ग्रामपंचायतींनी गावे सील केले आहेत. त्यामुळे वाहनचालकांना गावाच्या बाहेर येता येत नाही. तसेच काही वाहने विविध राज्यांमध्ये अडकून पडली आहेत. परिणामी शेतमाल वाहतुक ही थांबलेली आहे. कोट्यवधी रुपयांचे नुकसान होत आहे. ट्रान्सपोर्ट व्यवसायातील साखळी तुटून पडल्यामुळे चालक, क्लिनर, हमाल त्यांच्यासह शेतकरी, शेत मजुरांचे रोजीरोटीचा गंभीर प्रश्न निर्माण झाला आहे.

शेत मालाला कवडीमोल भाव -

जगाला विळखा घातलेल्या कोरोनापासून बचावासाठी देशात Lockdown करण्यात आला. त्या दिवशी महाराष्ट्र राज्यातील नाशिक जिल्ह्यात ९ हजार एकरांवर द्राक्ष शिल्लक होती. कोरोनामुळे बाजारपेठा बंद असल्यामुळे व्यापाऱ्यांनी खरेदी थांबवली. जगभरात निर्यात होणाऱ्या द्राक्षाला ब्रेक लागला. परिणामी प्रती एकरी स्थावर मालमत्ता सोडून प्रती एकरी दीड-दोन लाख खर्चून आणलेली द्राक्ष शेतकऱ्यांसाठी कडू झाली. जिल्ह्यातील शेतकऱ्यांना किमान खर्चाच्या हिशोबाने १८० ते २०० कोटींहून अधिक फटका बसला आहे. त्यात २०% निर्यातक्षम द्राक्षाचाही समावेश आहे.

शेतकरी द्राक्षाचे बेदाण्याकडे वळला तरी गुणवत्तेचा प्रश्न कायम आहे. आभाळच फाटलंय. ते सांधायचं कस, या विवंचनेत शेतकरी आहेत. अगदी बेदाणा केली तरी एकरी दीड लाखाचा घाटा कमी होण्याची चिन्हे नाहीत. गेल्या वीस दिवसांत ३ हजार एकरांवरील द्राक्ष बेदाण्याला तर किरकोळ

विक्री झाली. संकटात सापडलेल्या शेतकऱ्यांना सरकारच्या मदतीची अपेक्षाही फोल ठरेल, असे सध्याचे चित्र आहे.

कोरोनाच्या पार्श्वभूमीवर संपूर्ण देश Lockdown झाल्या नंतर शेती, शेतकरी आणि शेतीपूरक व्यवसायासमोरिल समस्या वाढताहेत. Lockdown चा मोठा परिणाम द्राक्ष शेतकऱ्यांबरोबरच कांदा, केळी, मोसंबी, संत्री, फळबागा, भाजीपाला इतर धान्य यावर पण दिसु लागला आहे.

सरकारने शेती मालाची वाहतूक Lockdown मधून वगळली आहे. तरीही प्रत्यक्षात मात्र द्राक्ष, फळे, भाजीपाला, पशुखाद्य, चारा व धान्य वाहतुकीमध्ये शेतकऱ्यांना अडचणीचा पाढा कायम आहे. वाहतूक परवाना पद्धत सोपी असूनही अंमलबजावणी जटिल होत आहेत. संसर्गाच्या भीतीने खासगी वाहनचालक मालाची वाहतुकीसाठी राजी होत नाहीत. त्यात मजूर मिळेनासे झाले आहेत. यामुळे शेतमाल शेतात पडून राहण्याची वेळ ओढून आलीआहे.

Lockdown मुळे शेतमालाचे दर कोसळले. कोरोनाच्या पार्श्वभूमीवर डोळ्यादेखत बागा मातीमोल होतानाचे चित्र डोळ्यासमोर आहे. द्राक्ष बागांसाठी स्थावर खर्च वगळता औषध, मजुरी, मशागतीसाठी प्रती एकर किमान दीड ते दोन लाख खर्च केले आहेत. द्राक्षाचा उत्पादन खर्च किलोला २० रुपयांपेक्षा अधिक आहे. अशावेळी त्यांना सध्या १२-१५ रुपयांनी द्राक्षाची मागणी केली जात आहे. अन् अशा परिस्थितीत बळेच माल विकावा लागतोय. हे चित्र भयानक सर्वच शेत मालाचेही भावाबाबत सारखेच विदारक आहे.

शेतमाल मागणीत घट -

कोरोनामुळे सर्वच उद्योगधंदे बंद आहेत. शेतमालाला उठाव नसल्याने व खरेदीसाठी परराज्यांतून व्यापारी डेलॅग्वेपु मुळे येत नसल्याने बाजार समितीतील कांद्यासह इतर शेतमालाची आवक घटली आहे. शिवाय भावात घसरण झाल्याने शेतकरी आर्थिक कोंडीत सापडला आहे.

Lockdown मुळे सर्वच ठप्प झाले. शेती व्यवसाय सुरू असला, तरी शेतमालाला मागणी नाही. परिणामी भाव कोसळले आहेत. त्यामुळे सर्वच बाजार समित्यांमध्ये शेतमालाची आवक घटली आहे. रोज प्रत्येक बाजार समितीत २५ ते ६० हजार किंटल शेतमालाची आवक होत असते. आता फक्त एक हजार ते दोन हजार किंटल आवक होत आहे. याबाबतीत महाराष्ट्रातील नाशिक जिल्ह्यात १० ते १२ हजार किंटल शेतमाल येताना दिसतोय. आवक कमी असली, तरी त्यालाही मागणी कमीच आहे. त्याचा परिणाम भावावर झाला आहे. शेतमाल विक्रीला आणण्याचा खर्चही निघत नसल्याने शेतकरी हवालदिल झाले आहेत.

मागील वर्षी कांद्याला चांगला भाव मिळाला. त्यामुळे यंदा महाराष्ट्रातील नाशिक जिल्ह्यात एक लाख ४० हजार

१७८ हेक्टरवर कांदा लागवड झाली. त्यातील बराचसा कांदा काढून झाला आहे. अवकाळी पावसाने काही ठिकाणी कांद्याचे मोठे नुकसान केले. कर्नाटक, आंध्रप्रदेश, तमिळनाडू येथून व्यापारी येत नसल्याने कांद्याचे भाव कोसळले आहेत. हॉटेल, उपाहारगृहे बंद असल्याने भाजीपाला, फळे, कांदा, बटाट्याला मागणी नाही. परराज्यातून कांद्याला थोडीफार मागणी असली, तरी तिकडे कांदा पाठविणे जिकिरीचे झाले आहे. कांदा व ईतर शेतमालाचे वाहतुकीसाठी वाहनांच्या भाड्यात दुपटीने वाढ कोरोनामुळे झाली आहे.

शेत मजुरांचा तुटवडा - शेतकऱ्यांचा गहू, हरभरा आदी शेतमाल काढण्याच्या कामात व्यस्त असतानाच कोरोनाचा प्रादुर्भाव वाढला. काही शेतकऱ्यांनी कापणी करून ठेवलेली होती, तर काही कापण्यासाठी तयार होता. हातातोंडाशी आलेले रब्बी पीक सध्या शेतात तसेच उभे आहे. शेतातील पीक काढणीला आले आहे परंतु त्यासाठी मजूर मिळेनासे झाले आहे. टाळेबंदीमुळे सर्व व्यवहारच ठप्प झाले आहेत. खरे तर हा काळीमिरी, कॉफी, केळी या पिकांच्या लागवडीचा हा हंगाम. मात्र, तो ही वाया जाताना दिसत आहे. टाळेबंदीमुळे रब्बी पिकाचा हंगाम रोडावला आहे. मजूर मिळेनासे झाले आहेत, पीक काढणीत उपयोगाला येणारी हार्वेस्टर्स, श्रेशर्स, ट्रॅक्टर्स यांसारखी यंत्रे मिळेनाशी झाली आहेत, मालवाहतूक ठप्प झाली आहे, लोकांच्या हालचालींवरच बंदी आली आहे. फळे, भाजीपाला आणि फुले यांसारख्या नाशवंत पिकांचे उत्पादक तर तोट्यात गेले आहेत. त्यांच्या मालाला उठाव नाही. हाती असलेला माल त्यांना कवडीमोल भावाने विकावा लागत आहे. इतरही शेती कामाला मजूर Lockdown मुळे मिळत नहीत. परिणामी पिक हातातोंडाशी आलेले वाया गेले. यात शेतकऱ्यांचा खर्च वाया गेला.

बंद बाजारपेठा -

देशभरात बाजारसमित्यांवरही डेलॅग्वेपु चा परिणाम दिसून आलाय. बाजार समितीमधील व्यवहार बंद केल्यामुळे शेतकऱ्यांना शेतमालाची कोणतीही विक्री करता येत नाही. परिणामी त्यांचे सर्व आर्थिक व्यवहार ठप्प झाले आहेत. काही बाजार समित्या सुरू केल्या मात्र तरीही शेतमालाला भाव मिळालेला नाही.

शेतीपुरक उद्योगांना खिळ बसली -

Lockdown मुळे शेती आधारीत पुरक उद्योगांना फटका बसला. दुधाबरोबरच जास्त फटका पोल्ट्री व्यवसायाला बसला. कोंबडीपालन व्यवसायात वापरले जाणारे खाद्यान्न फिड बनविण्यासाठी मका वापरला जाते. मांस विक्री थांबल्या नेमका पिकाची मागणी घसरली.

तसेच अंड्यांना नीचांकी भाव मिळत आहे. आज एका अंड्याची किंमत १ रुपया ९५ पैसे एवढी आहे. भारतातील

सर्वात मोठे पोल्ट्री केंद्र असलेल्या नमकल येथे अनेक अंडी विक्री अभावी पडून आहेत. तामिळनाडूतील अनेक कंत्राटी पोल्ट्री शेतकरी, लहान दुग्ध उत्पादक शेतकरी यांनाही मोठ्या नुकसानीला सामोरे जावे लागत आहे. कारण अनेक खासगी कंत्राटी संस्थांनी त्यांचा माल घेण्यासच नकार दिला आहे. मच्छिमारांची अवस्थाही काहिशी अशीच आहे. मार्च अखेरपासून मच्छिमारांनी मासेमारीसाठी समुद्रात बोट ढकललेलीच नाही. आणि आता माशांचा प्रजननाचा काळ म्हणून दरवर्षी जाहीर होणारा ४५ दिवसांचा ना-मासेमारी हंगामही तोंडावर येऊन ठेपला आहे. त्यामुळे मच्छिमारांसमोर रोजगाराचा प्रश्न आ वासून उभा आहे. इतरही शेतीपुरक उद्योगांना खिळ बसली आहे.

शेतमालाचे मागणी दरत घट -

जागतिक महामारी कोरोना (कोविड-१९) पार्श्वभूमीवर मा. पंतप्रधान नरेंद्र मोदीसाहेबांनी देशात Lockdown घोषणा केली. अन यावेळी बाजारपेठादेखील ठप्प झाल्या, जगासह देशात धुमाकूळ घातलेल्या coronavirus या महाभयंकर आजाराने शेतकऱ्यांचे अक्षरशः कंबरडे मोडले आहे. शेतमालाला बाजारपेठेत मागणी नसल्याने शेतकऱ्यांवर आर्थिक कुऱ्हाड कोसळली आहे. खरेदी करणारे व्यापारी यांनाही काही ठिकाणी कोरोनाची लागण झाल्यान तिथले व्यवहार थांबले. परिणामी मागणीत घट झाली. याचा परिणाम कृषी क्षेत्रातील आर्थिकतेवर झाला आहे.

शेतकरी कर्जाचे जाळ्यात -

सरकारी व खाजगी बँका आता कर्ज देत नसल्यामुळे ग्रामीण भागात उधार उसनवारीवर व्यवहार करणेही पुर्वापार पद्धत रूढ आहे. एखाद्या बड्या सावकाराकडून मोठ्या व्याज दराने कर्ज घेऊन ते नंतर फेडले जाते. प्राप्त परिस्थितीवर मात करण्यासाठी अशाच कर्जांचा सहारा घेतला जाईल, अशी चिन्हे आहेत. शेतकऱ्यांना सावकार अधिक टक्केवारीने कर्ज देत असल्याचे वृत्त आहे. अडले-नडलेले शेतकरीही सुगीच्या हंगामानंतर या कर्जांची परतफेड करण्याच्या बोलीवर कर्ज उचलत आहेत. मात्र, नाशवंत मालाला बाजारपेठेपर्यंत जायला वाहनच उपलब्ध होत नसल्याने ते स्थानिक बाजारपेठेतच पडेल. कमी किमतींनी विकले जात असल्याने शेतकऱ्यांना आर्थिक नुकसान आणि घेतलेल्या कर्जाचे मोठे हप्ते अशा कात्रीत शेतकरी पकडले जात आहेत..

निर्यात बंदीचा फटका-

चीनमध्ये कोरोना व्हायरस (coronavirus) पसरल्यामुळे चीन सरकारने ८०% आयात-निर्यात थांबवली (Cotton export stop due to corona) आहे. त्यामुळे भारताकडून येणारी कापसाचीही निर्यात चीनने थांबवल्यामुळे ३ लाख गाठी भारताकडे पडून आहेत. निर्यात थांबल्यामुळे सीसीआयने

देखील जिल्ह्यात कापूस खरेदी केंद्र बंद केले आहेत. शासकीय खरेदी बंद झाल्याने व्यापाऱ्यांकडून शेतकऱ्यांची पुन्हा लूट सुरु झाली आहे. शेतकऱ्यांनाही नाईलाजास्तव हमी भावापेक्षा तब्बल ५०० रुपये कमी दराने कापूस विक्री करावा लागत (Cotton export stop due to corona) आहे.

चीन हा भारताचा प्रमुख कापूस निर्यातदार देश आहे. दरवर्षी भारताकडून १२ ते १५ लाख गाठी चीनला निर्यात होतात. यंदा जानेवारीपर्यंत ६ लाख गाठींची निर्यात चीनमध्ये झाली आहे. मात्र, कोरोना व्हायरसचे वाढत असलेले प्रमाण यामुळे चीनमधून येणारा माल आणि भारतातून जाणारा मालदेखील चीन सरकारने थांबवला आहे. त्यामुळे कापसाची पुर्णपणे निर्यात थांबली आहे.

भारताकडे चीनला पाठविण्यात येणाऱ्या ३ लाख गाठी पडून आहेत. भारतासह अमेरिका आणि इतर देशातील निर्यात थांबवल्यामुळे आंतरराष्ट्रीय बाजारातदेखील कृषी क्षेत्रावर याचा विपरित परिणाम झाला आहे. अन्य शेतमालावरही निर्यात बंदीचा फटका बसलेला आहे.

शेती हमी भावाचे तीनतेरा -

हमी भावात घट आंतरराष्ट्रीय बाजारात पसरलेल्या मंदीचा परिणाम कापसासह अन्य शेतमाल भावावरदेखील झाला आहे. कापसाचा विचार केला तर लाखो गाठी भारताच्या बाजारातच पडून असल्याने आठवडाभरात हमी भावात १०० रुपयांची घट झाली आहे. शासनाने कापसाचा हमी भाव ५५५० इतका निश्चित केला होता. मात्र, सध्या ५४५० इतक्या भावाने कापसाची खरेदी होत आहे. सीसीआयने जरी खरेदी थांबवली असली तरी मात्र पणन महासंघाचे खरेदी केंद्र सुरु आहेत. सीसीआयचे केंद्र बंद होताच व्यापारी-एजंट सक्रीय झाले. आतापर्यंत जिनिंग किंवा शासकीय खरेदी केंद्रावर १५ लाख क्विंटल कापसाची खरेदी झाली आहे. अद्याप ५० % माल शेतकऱ्यांच्या घरातच पडून आहे. त्यातच शासकीय खरेदी थांबल्यामुळे आता ती पुन्हा सुरु होईल की नाही? या बाबत साशंकता आहे. त्यामुळे आता शेतकऱ्यांना खासगी जिनिंग आणि व्यापाऱ्यांना माल देण्याशिवाय पर्याय नाही. अशा परिस्थितीत व्यापाऱ्यांकडून ४७०० ते ४८०० रुपये प्रति क्विंटल कापूस खरेदी केला जात आहे. यामुळे शेतकऱ्यांचे तब्बल ५०० ते ६०० रुपयांचे नुकसान होत आहे. अशाच प्रकारे कोणत्याही शेतमालाला सरकारी दराने ठरल्याप्रमाणे खरेदी होताना दिसत नाही.

कोरोनाचे भारतीय शेती अर्थव्यवस्थेत भविष्यातील परिणाम -

शेतमाल व अन्न धान्याची टंचाई -

कोरोनाचे आजाराचे संकटामुळे शेतमालाला भाव न मिळणे, शेतमाल मागणीत घट, भाव नसल्यामुळे, शेतमाल

निर्यात होत नसल्यामुळे शेतमाल शेतकरी जास्तीतजास्त न पिकवता कमी पिकवण्याचा प्रयत्न करतील. भांडवलाचा अभाव असल्यामुळे सुधारीत बीबियाणे खरेदी करणे शक्य नाही. परिणामी शेतमाल व अन्नधान्य तुटवडा निर्माण होईल..

शेतमालाची किंमत वाढ -

शेतीत आजवर असे चित्र झालेले नव्हते मात्र जर ही coronavirus महामारीमुळे सर्व शेतकऱ्यांना अडथळे पार करत शेती करावी लागत असल्याने अन जगण्यासाठी आवश्यक शेतमाल खरेदी करणे आवश्यकच असल्याने भविष्यात शेतमालाची किंमत वाढण्याची शक्यता नाकारता येणार नाही.

शेतमाल निर्यातीत घट -

भारतात शेतमालाची निर्यात मोठ्या प्रमाणात होवून परकिय चलन मिळत असते. मात्र ह्या coronavirus महामारीमुळे आपला शेतमाल बाहेर घेतला जाणार नाही. याचा प्रत्यय Lockdown काळात आपण पाहिलाच आहे. याला अनेक कारण जबाबदार आहेत.

आपल्या देशातील उपलब्ध लोकसंख्येचा विचार करता उपासमारी थांबविण्याचे दृष्टिकोनातून ही शेतमाल निर्यातीवर शासकिय बंधने राहतील. जरी शेतमाल जास्तीतजास्त पिकवला अन् नाही ही पिकवला तरि मात्र शेतकऱ्यांना याचा आर्थिक दणका बसणारच आहे.

उद्योगधंद्यांवर विपरित परिणाम -

ह्या महामारीमुळे भविष्यात साखर, कापड, रेशीम व अन्य ही शेतीपुरक व्यवसायांना फटका बसू शकतो. अशाप्रकारचे कृषी क्षेत्रातील व्यवसाय कुक्कुटपालन, शेळीपालन, दुग्धव्यवसाय, मशरूम शेती, रेशीम शेती, मधमाशीपालन, मत्स्यपालन, कृषी पर्यटन उद्योग, चारा निर्मिती, वैरण, बियाणे उत्पादन, संकलन व वितरण, पशुखाद्य निर्मिती, गांडूळ खत, अळिंबी उत्पादन, शेतमालापासून विविध पदार्थ, औषधी वनस्पती लागवड, फळप्रक्रिया उद्योग सर्व शेती उद्योगांवर टांगती तलवार ज्यात शेतमाल, सह अर्थसहाय्य थांबले जाण्याची शक्यता नाकारता येणार नाही.

परकिय चलनाचा तुटवडा -

शेतीचे उत्पन्नात जगात भारताचा दुसरा क्रमांक आहे. देशात शेतीचा उत्पन्नाचा वाटा १६.१% इतका आहे. भारतीय मिश्र अर्थव्यवस्था जरी असली तरी सर्वच क्षेत्रात याचा फटका बसू शकतो.

मागणी अन् पुरवठा याचा विचार करता देशातील सरकारी शेतीधोरण आधीच शेतकऱ्यांचे बाजुन नसले. तरी यात भर पडणार महामारीचे नावाने अन इथला निर्यात व्यापार कोसळून शेतकऱ्यांचे शेतमालाला भाव मिळणार नाही हे वास्तव आज हि उद्या असेच असेल. यामुळे राष्ट्रीय उत्पन्नाचा दर कोसळेल.

परिणामी तंत्रज्ञानाचा विकास व अवलंब कृषी क्षेत्रात करता येणार नाही.

शेतीचे उत्पन्न घटणार -

शेती हा नेहमीच तोट्याचा व्यवसाय आहे. यात अनेकदा सरकारकडून कर्जे माफिची मागणी पुढ येतेय. तर याचा विचार केला तर हे सत्य आहे शेतीत टाकलेले भांडवल व मेहनतीचा विचार करता शेतकऱ्यांना पाहिजे तसा पैसा मिळत नसल्याचे शेतीतले उत्पन्न घटेल, हे सत्य नाकारता येणार नाही.

महाराष्ट्र राज्यातील शेतीचा विचार केला तर सातत्याने तोट्यातच असल्याचे राज्य सरकारच्या आर्थिक पाहणी अहवालातून स्पष्ट होतं. विशेष म्हणजे २०१७-१८ या आर्थिक वर्षात पिकांतील 'मूल्यवृद्धी' उणे१४.४% इतकी म्हणजेच नकारात्मक राहिलेली आहे. ही रकम पैशांत मोजली तर ती काही हजार कोटींमध्ये जाते. तर गेल्या ६ वर्षात शेती ४ वेळा तोट्यात राहिलीअसल्याचं स्पष्ट झाले आहे. यामुळेच शेतकरी अधिकची जोखीम उचलत शेतीवर जास्तीतजास्त भांडवल लावेल अस तरी चित्र भविष्यात नसेल अस वाटतय.

आर्थिकविकासावरप्रतिकुलपरिणाम-

शेतीचा अर्थव्यवस्थेतील वाटा जरी मोठा असला तरी आज शेतीला फारसे चांगले दिवस नसले तरी देशातील उत्पन्नात शेतीचे महत्त्वपूर्ण स्थान नाकारून चालणार नाही. मात्र यापुढे बदल निश्चित होतील असेच चित्र दिसतेय.

सर्व शेतीमाल, शेतीपुरक व्यवसायांना जागतिक महामारीमुळे प्रतिकुल परिणामांना सामोरे जावे लागून शेती आर्थिक विकासदर घटता पहायला मिळेल. याला शासकिय धोरणासह वर्तमान संकटसदृश परीस्थिती जबाबदार असेल.

राष्ट्रीय उत्पन्नावर परिणाम -

राष्ट्रीय उत्पन्नाची विभागणी मूलतः तीन विभागात केली जाते १) शेतीवतत्सम, २) उद्योग व कारखानदारी ३) व्यापार व व्यवसाय अशी केली जाते. हे सर्व व्यवसायांना कोरोना जागतिक महामारीचा परिणाम होईल.

विचार करता रोजगारामध्ये अजूनही ६०% पेक्षा अधिक हिस्सा शेतीचाच आहे. देशाच्या निर्यातीमध्ये ही शेतमालाची निर्यात बऱ्यापैकी आहे. अजूनही ग्रामीण लोकसंख्येचे प्रमाण ५०% पेक्षा अधिक आहे. सहाजिकच अजूनही आपली अर्थव्यवस्था रोजगार प्रमाणाच्या निकषावर कृषीप्रधान असली तरी ही राष्ट्रीय उत्पन्नात घट होईल. सर्व कारण हि एकमेकांना पुरक असून सर्वांचाच परिणाम हा कृषी अर्थव्यवस्थेवर होणार आहे

शेतमालाची मागणी घटणार -

कोरोना हा जागतिक आजार संसर्गजन्य असल्यामुळे परकिय देशातून आयातीचा ओघ थांबेल. मागणी घटली तर उपलब्ध पिकवलेल्या मालाला भाव मिळण्याची शक्यता उरतच

नाही. शेतीक्षेत्रातील भाव पडले जातील.

रोजगाराचा प्रश्न निर्माण होणार -

देशामध्ये साधारण ५०% जनता पोट भरण्यासाठी शेतीवर अवलंबून आहे. या ५०% मध्ये, आर्थिकदृष्ट्या सर्वांत दुबळ्या अशा 'भूमिहीन शेतमजूर' वर्गाचा समावेश आहे. कोरोना महामारीमुळे शेती कसण्याच थांबले तर या वर्गाचे काय होणार..? बेरोजगारीत भर पडणार हे वास्तव नाकारता येणार नाही.

कृषी क्षेत्रातील गुंतवणुक प्रभावित होणार -

वरील सर्व परिणामांचा विचार केला असता कृषी क्षेत्रात गुंतवणुक नगण्य असेल. भारताचा विचार केला तर आधीच हे प्रमाण अल्प आहे. यात भर आता महामारीची असल्यामुळे अर्थव्यवस्थेचा कणा मोडकळीस आल्याशिवाय राहणार नाही. ह्या सर्व परिणामांचा परामर्श सत्यता परस्परपुरक असे आहेत. शेती अर्थव्यवस्थेत बदल नक्कीच दिसतील ज्यांचा वर्तमान व भविष्यात होणारा परिणाम हा प्रतिकूल असेल. यासाठी कृषी धोरणाबाबत सरकारने अनुकूल असे पाऊल उचलण्याची आवश्यक गरज वाटते.

निष्कर्ष -

coronavirus कोवीड-१९ च्या महाभयंकर महामारीमुळे शेतकरी दुहेरी संकटात सापडला आहे.

एक कोरोना आजाराला भयंकर धास्ती अन् दुसरे त्याच्या जीवनावर परिणाम करणारे आर्थिक संकट सावरणे कठिन वाटतेय.

सध्या शेतकऱ्यांची आर्थिक स्थिती फार बिकट आहे. coronavirus मुळे आर्थिक परिस्थितीचा सामना अन् पुढे उभे असलेले आव्हान यातून मार्ग काढण्यासाठी सध्या तरी जरतरेचे सावट आणि अनिश्चिततेचे ढग दाटून आले आहे. कोवीड-१९ ची परिस्थिती जर अजून ही हाताबाहेर गेली अन् Lockdown चा निर्णय लांबविला तर त्याचा सर्वांत मोठा फटका शेतकरी वर्गाला बसणार आहे. कोरोनाच्या भीषण संकटातून बाकीचे उद्योग व्यवसाय जैसेथे असतील कारण त्यांचा उत्पादनखर्च आणि प्रोडक्शनही थांबलेले आहे. शिवाय त्यांचा माल नाशिवंत नाही. कोवीड-१९ नंतर ते पुन्हा जोमाने सक्रिय होतील. पण शेती आणि शेतीपूरक व्यवसाय यांना सावरायला अनिश्चित कालावधी लागणार आहे. लॅम्पीट्सी कोवीड-१९ आणि डेल्टावेपु मुळे प्रचंड महागाई आणि बाजारपेठ अस्थिरता जाणवणार आहे. कोवीड-१९ चे परिणाम ग्रामीण भागात सध्या खूप मोठ्या प्रमाणात जाणवू लागले. गावबंदी झाली. त्यामुळे मजुर कोरोनाच्या भीतीने घरातच बसून राहिले. शेती काम करायला मजुरांचा तुटवडा निर्माण झाला. त्यामुळे खेळत्या भांडवलाची कमतरता अन् मार्केट व्यवस्थेत निर्माण झालेली मंदी, वाढलेली बेरोजगारी,

शेअरमार्केटची घसरणुडी, देशाचा आर्थिक G. D. P. दर, आंतरराष्ट्रीय स्तरावर रूपयाचे घसरलेले मुल्यांकन, आर्थिकदृष्ट्या कमकुवत झालेला देश, नोटबंदीचे दुष्परिणाम. या सर्व गोष्टींचा विचार केला तर. कोवीड१९ च्या बिमारीने यात पुन्हा एकदा निगेटिव्ह भर टाकली आहे.

शेतकऱ्यांना केंद्रस्थानी ठेवून कृषीविरोधी कायदे रद्द करून कृषी क्षेत्राला मुख्य प्रवाहात आणण्यासाठी उच्च स्तरीय बदल करणे अपेक्षित आहे...

निष्कर्षाचा विचार करता शेतीचे महत्व अनन्यसाधारण आहे. भारत हा कृषिप्रधान देश मानला जातो. भारतातील सुमारे ७०% जनता उदरनिर्वाहासाठी शेती व्यवसायावर अवलंबून आहे. भारतात काम करणारे २ तृतीयांश लोक शेती अथवा शेती उद्योगांशी संबंधित आहेत. देशाच्या राष्ट्रीय उत्पन्नात शेती व्यवसायाचा वाटा सुमारे १८ ते २०% इतका आहे. सुमारे ३०% जनता अप्रत्यक्षरीत्या त्यांच्या अन्न, वस्त्र, निवारा या गरजांसाठी शेतीच्या उत्पन्नावर अवलंबून आहे. शेतीच्या एकूण उत्पन्नात भारताचा जगात दुसरा क्रमांक आहे. अजूनही शेती हाच भारतीय अर्थव्यवस्थेचा मोठा घटक आहे. भारताच्या आर्थिक सामाजिक विकासामध्ये ह्या क्षेत्राची महत्त्वाची भूमिका आहे. त्यामुळे भारताच्या पंचवार्षिक योजनांमध्ये शेतीला नेहमी प्राधान्य देण्याचा प्रयत्न केला गेला.

शेती उत्पन्नाचा आंतरराष्ट्रीय व्यापार, केंद्र सरकारच्या शेती क्षेत्रासाठीच्या नव्या उपयुक्त योजना व अनेक राष्ट्रीय, आंतरराष्ट्रीय कंपन्यांचे ऑर्गनाईज रिटेल, अॅग्रो प्रोसेसिंग व लॉजीस्टिकच्या क्षेत्रात पदार्पण यामुळे २१ वे शतक हे शेती व्यवसायासाठी सुवर्ण संधीचे बनले. मात्र शेतमालाला भाव नसल्यामुळे शेतकरी अर्थसहाय्यामुळे कर्जबाजारी होत आहे.

अस्मानी व सुलतानी संकटाचे चक्रातुन कृषी क्षेत्रातील शेतकरी शेती अर्थव्यवस्थेला सावरण्याची आवश्यकता वाटते. भारतात शेती व्यवसायाला अग्रक्रम देण्याबाबत काहिही दुमत नसावे.

भारतीय अर्थसंकल्पात शेतीच्यादृष्टीने महत्त्वाच्या तरतुदी करण्याची गरज आहे यादृष्टीने देशातील बहुसंख्य ग्रामीण विकास बँकांच्या आधुनिकीकरणाची व्यवस्था बळकट व्हावी. अर्थसंकल्पात शेतीच्या खर्चात केलेली वाढ हि कागदावर भाषणापुरती न रहाता तो खर्च प्रत्यक्षात व्हायला पाहिजे.

सूक्ष्म सिंचन योजना, अन्न सुरक्षा कार्यक्रम, फलोद्यान कार्यक्रम, जिरायती शेती कार्यक्रम, दुग्धउत्पादन कार्यक्रम अशा शेतीबाबत कार्यक्रमांसाठीचे खर्चात वाढ करण्यात येवून शेत मालाच्या सुरक्षित साठ्यासाठी गोदामे व शीतगृहे या योजनांसाठी भरिव आर्थिक तरतूद असावी. या योजनांवर भर दिल्यास आपणास भारतीय अर्थव्यवस्थेमधील शेती क्षेत्राचे उत्पन्न वाढ होण्यास मदत होईल. शेतकरी सुखी तर जग सुखी

याचा प्रत्यय येईल.

एकंदरीतच कोरोना महामारीमुळे भारतीय कृषिक्षेत्र प्रभावित होवून भारतीय अर्थव्यवस्थेचा वेग मंदावणार याविषयी कुणाचेही दुमत असण्याचे कारण नाही.

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पर्यावरण, प्राणी आणि मानव यांच्यावरील लॉकडाऊनचा प्रभाव

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आज अतिशय गंभीर अशा स्वरूपाच्या वैश्विक महामारीशी संपूर्ण जग लढते आहे. पाच-सहा महिन्यांपासून या विषाणूने संपूर्ण जगाला वेठीस धरले आहे. परदेशातून आयात झालेला हा विषाणू सुरुवातीला कळून येत नव्हता. भारतात तो मार्च महिन्यात पोहचला. तत्पूर्वी कोरोना व्हायरसने जपान, इटली, अमेरिका, स्पेन या बलाढ्य देशांमध्ये हातपाय पसरायला सुरुवात केली होती. या विषाणूचे नाव कोविड-१९ ठेवले आहे. चीनमधील ओव्हान शहरात या विषाणूचा जन्म झाला. मात्र त्याची कशापासून निर्मिती झाली. हे खुद्द चीनलासुद्धा माहित नाही. जागतिक पटलावर बलाढ्य असणाऱ्या देशाने याकडे तितकस गंभीराने पाहिले नाही. असे मला वाटते. कदाचित त्यामुळे हे प्रमाण मिनिटांबरोबर वेगाने वाढत चाललेले आहे. या विषाणू संदर्भात विशिष्ट अशी लस आजपर्यंत उपलब्ध झालेली नाही. याची लक्षणे लक्षात यायला वेळ जात असल्यामुळे, त्यात मृत्यूचे प्रमाणही प्रचंड आहे. कोरोना व्हायरस या विषाणूने संपूर्ण जगाला हादरून टाकले आहे. काही माणसे एखाद्या पटकीच्या रोगासारखी पटापट मरत आहेत. ही अतिशय हेलावून टाकणारी गोष्ट आहे. परदेशात याचे वाढते प्रमाण लक्षात घेता, दैनंदिन जीवन व्यवहार वेळेस थांबवायला हवा होता. मात्र हा निर्णय घेण्यात कुठे तरी उशीर झाला. आणि त्याचे दूरगामी परिणाम आज संपूर्ण जगाला भोगावे लागत आहेत. यावर सध्या तरी एकच पर्याय उपलब्ध आहे. घरी रहा सुरक्षित रहा. आपण बाहेर पडलो नाही, तरच आपण वाचणार आहोत. हे समजायला हवे. या महामारीचे दुष्परिणाम कळायला बराच वेळ गेला. सर्वसामान्यांनी तुम्ही-आम्ही याला सहज घेतलं. कोरोना आपल्याला होणारच नाही. अशा गैरसमजामध्ये आपण राहिलो. शासनाने घालून दिलेले नीतिनियम आपण स्वतः न पाळल्यामुळे आज कोरोनाने रौद्ररूप धारण केले आहे.

आपल्या देशाने लॉकडाऊनचे हे शस्त्र अगदी योग्यवेळी वापरले. जर लॉकडाऊन केला नसता तर, कदाचित आजची परिस्थिती भयानक स्वरूपाची असते. या लॉकडाऊनमुळे नागरिकांचे जगणे असह्य झाले. पोटा-पाण्याचे गंभीर प्रश्न निर्माण झाले आहेत. अचानक सगळा देश स्तब्ध उभा राहिल्याने, रोजी-रोटीचा सवालही सर्वासमोर उभा राहिला

आहे. हातावर पोट असणाऱ्या मोल-मजुरांची दोनवेळच्या जेवणाची समस्या उभी राहिली. बाहेर पडायचं नाही म्हटल्यावर पैसा कसा येणार. मोल-मजुरी करणाऱ्या लोकांचे या लोकांमुळे जगणं असह्य झाले आहे. हाताला काम नाही, आणि पोटाला घास नाही. अशा परिस्थितीत काय करायचं. ही फार मोठी गंभीर समस्या निर्माण झालेली आहे. परप्रांतांमधून काम-धंद्यासाठी आलेल्या मोल-मजुरांनी जायचं कुठे. घरी जायचं म्हटलं तर सर्व वाहतूक व्यवस्था बंद. त्यामुळे त्यांच्यावर दुःखाचा डोंगर कोसळला आहे. तुटपुंज्या पगारातून बचत केलेले रुपये कधीच संपले. आता करायचं काय? हा प्रश्न सर्वासमोर आवासून उभा राहिला आहे. यामधूनच दिवसेंदिवस कोरोनाबाधित रुग्णांची संख्या वाढत चाललेली दिसते. निश्चितच ही सर्व काळजी वाढवणारी गोष्ट आहे. लॉकडाऊनची परिस्थिती असूनसुद्धा एवढे रुग्ण वाढत आहेत. त्यामुळे सर्वत्र भयानक परिस्थिती निर्माण होताना दिसत आहे. लॉकडाऊन जर योग्यवेळी केला नसता तर, आजच्या जेवढे रुग्ण दिसत आहेत. त्यापेक्षा कितीतरी पटींनी हा गुणाकार झाला असता. covid-19 सारखा विषाणू इतका महाभयंकर असू शकतो. हे कुणाच्या ध्यानी-मनीही नव्हते. मात्र कोरोनाचे हे भयानक रूप आता सर्व जगाच्या लक्षात आले आहे. त्याने संपूर्ण जगामध्ये आपली एक दहशत निर्माण केली आहे. ज्यांनी-ज्यांनी कोरोना या विषाणूला अगदी सहज घेतलं. ते आता या जगात राहिले नाहीत. कोरोना या विषाणूने संपूर्ण जगाच्या पायात बेड्या टाकल्या आहेत. संपूर्ण जग आता जेलबंद झाले आहे. खरंतर आपण लॉकडाऊनकडे सकारात्मकदृष्टीने पाहायला हवं. हा लॉकडाऊन बंधन न समजता बांधिलकी म्हणून आपण स्वीकारायला हवा. आपण घरात असताना आपले डॉक्टर्स, नर्स, स्वच्छता कर्मचारी, पोलीस, शेतकरी सगळेजण खडा पहारा देत आहेत.

केवळ आणि केवळ आपल्या सुरक्षेसाठी, आपल्या फायद्यासाठी मात्र हा विचार आपण करायला हवा. स्वतःचे आरोग्य धोक्यात घालून, सेवा देणारे खऱ्या अर्थाने कोरोना या साथीच्या रोगातील महायुद्धा आहेत. त्यांना माझा मानाचा मुजरा. माणूस घरात बंद आहे. रस्ते सुनेसुने झाले आहेत.

गाव, शाळा, शहर सगळे शांत आहेत. ही शांतता दहशतीची आणि भीतीची आहे. काळजीचं गुंजन करणारी आहे. लॉकडाऊनमुळे एक वेगळेच चित्र समोर आलेले दिसते. ते म्हणजे पशु-पक्षी शांत रस्त्यांवर, झाडाझुडपांवर स्वच्छंदपणे उडत आहेत. मंजुळ गाणे गात आहेत. नद्यांचे स्वच्छ पाणी खळखळ वाहताना दिसत आहे. जे रस्ते रोज गजबजलेले असतात. ज्या रस्त्यांवर धुरांचे लोट सोडले जातात. ते रस्ते आता मोकळा श्वास घेताना दिसत आहेत. प्रदूषणाची पातळी जवळजवळ नष्ट झालेली आहे. एकेकाळी पिंजऱ्यात बसणारे पशु-पक्षी वन्यजीव आज मात्र मनमोकळा, मनसोक्त निसर्गाचा आस्वाद घेताना दिसत आहेत. हे विश्वसुद्धा आपलेच आहे. हे पशुपक्ष्यांना कळायला लागले आहे. हा फार मोठा बदल निसर्गाने घडवून आणलेला आहे.

प्रशासनाने घालून दिलेल्या नितीनियमांचं पालन आपण करायला पाहिजे. ते नियम सक्ती न मानता सजग भान ठेवून पाळायला हवेत. ते नियम पाळणे ही आपली जबाबदारी आहे. हे समजून घ्यायला हवे. नियम पाळू आणि कोरोनाला हरवू, हात स्वच्छ धुऊ या कोरोनाला हरवू, आपण घरात कोरोना दारात, तेव्हा घरात थांबू या, आपल्या कुटुंबाला वेळ देऊ या. इतक्या वर्षात आपण एवढा वेळ कधीच कुटुंबासाठी दिलेला नव्हता. आज धावपळीच्या, धकाधकीच्या जगण्यात

हा खूप मोठा ब्रेक निसर्गाने आपल्याला दिलेला आहे. याच्याकडे संधी म्हणून पाहायला हवे. एकमेकांना नव्याने समजून घेण्यासाठी, जुने राहिलेले संवाद पूर्ण करण्यासाठी, किती तरी मनात साठलेल्या गोष्टी व्यक्त करण्यासाठी, मनमुराद हसण्यासाठी, एकमेकांना पुन्हा जगण्याची प्रेरणा देण्यासाठी, वेळेचा आपण सदुपयोग करायला हवा. घरासाठी राब-राबराबणाच्या हाताचे कौतुक करण्यासाठी, नवनवीन काही तरी शिकण्यासाठी आपला वेळ देऊ या. नवीन एखादं पुस्तक वाचण्यासाठी मन रमऊया, सगळ्याच वातावरणात आपले मनोधैर्य कुठे ही कमी पडणार नाही. याची काळजी आपण घ्यायला हवी. एक दिवस हा विषाणू संपेल. असा आशावाद आपण जिवंत ठेवू या. येणारा प्रत्येक क्षण आनंदाने घालवूया. कोरोना टाळू या माणुसकीला जपू या. आपल्यातला एक घास दुसऱ्यासाठी देऊ या. माणूस म्हणून जगू या कोरोनाला संपवू या एक दिवस आपण जिंकणार. नक्कीच हा विषाणू नष्ट होणार. हा दांडगा विश्वास बाळगू या. सर्वांना जपू या सर्वांना जपू या. घरातील कलह टाळू या. चेहरा हसरा ठेवू या. कोणाला हरवू या. लहानांची आणि वृद्धांची काळजी घेऊया. मानापमान विसरून पुन्हा नव्याने जगू या. पुन्हा नव्याने जगू या.

कोरोनाचा सामाजिक प्रभाव आणि उपाय

डॉ. पौर्णिमा शिरिष कोल्हे

राजमाता जिजाऊ शिक्षण, प्रसारक मंडळाचे
कला, वाणिज्य व विज्ञान महाविद्यालय लांडेवाडी, भोसरी पुणे

प्रास्ताविक -

कोरोना हे विषाणूच्या एका समूहाच नाव आहे. साध्या सर्दी खोकल्यापासून ते सार्स (Severe -cute Respiratory Syndrome) किंवा मर्स (Middle East Respiratory Syndrome) यांसारख्या गंभीर आजारसाठी कोरोना विषाणू कारणीभूत असतात. परंतु यावेळी 'वुहान' शहरात जो कोरोना विषाणू आढळून आला तो मात्र यापूर्वी आढळलेल्या कोरोना विषाणूपेक्षा वेगळा आहे. कारण त्याची जणूकीय रचना इतर कोणत्याही पूर्वीच्या कोरोना विषाणूंशी मिळतीजुळती नाही त्यामुळेच या नव्या विषाणूला नोवेल कोरोना वायरस २०१९ (NCov 2019) असे नाव प्राप्त झाले या आजाराला जागतिक संघटनेने COVID-19 असे नाव दिले आहे. नवीन कोरोना विषाणू आजाराची लक्षणे ही मुख्यत्वे श्वसनसंस्थेशी निगडीत असतात सर्दी, खोकला, श्वास घ्यायला त्रास होणे, निमोनिया काही वेळा मूत्रपिंड निकामी होणे अशी काही मुख्य लक्षणे या आजारात दिसून येतात. शिकण्या खोकण्यातून हवेवाटे जे थेंब बाहेर पडतात त्यातून हा आजार सगळीकडे पसरतो. त्यामुळे एकमेकांच्या जवळ न जाणे कोणत्याही पृष्ठभागाला स्पर्श झाला असेल तर हात वारंवार साबणाने स्वच्छ धुणे हे काही प्राथमिक पण आवश्यक उपाय यांवर गुणकारी ठरलेत. या आजारावर आजपर्यंत कोणतेही औषध किंवा लस उपलब्ध नाही.

कोवीड-१९ या संसर्गजन्य आजाराचा १८० देशांत प्रादुर्भाव झाला आहे. सर्व व्यवस्था-उपव्यवस्था ठप्पा झाल्या आहेत. प्रत्येक क्षेत्रातील विद्वान आपआपली मते, विचार, योजना मांडताना दिसतात. त्यांच्याच विचारांचा संदर्भ घेऊन असे प्रतिपादन करता येईल की, इतिहासाचा जर आपण अभ्यास केला तर असे लक्षात येते की, आतापर्यंत बरेच साथीचे आजार आले, युद्ध झाली. अनुवंशिक आजाराने (मधुमेह, हृदयविकार, रक्तदाब) अनेक लोक मरण पावताहेत परंतु कोवीड-१९ हा आजार वेगळ्या स्वरूपाचा आहे. या महामारीमुळे संपूर्ण जगासमोर वेगवेगळे प्रश्न उभे राहिले आहेत समाजव्यवस्था, पर्यटन कला, क्रीडा, शिक्षण, कृषी, उद्योग-व्यवसाय इ. क्षेत्रात मंदी आली आहे. त्यांचे सर्व कारभार ठप्प झाले आहेत. एक प्रकारच्या दडपणाखाली संपूर्ण

मानवजात जगत आहे तज्ञांच्या मतानुसार हे २-३ वर्ष तरी असेच चालू राहू शकते कोविड-१९ मुळे जगभर आर्थिक मंदीची समस्या भेडसावणार आहे आणि त्यातल्या त्यात शहरी भागात ही समस्या तीव्रतेने जाणवणार आहे. सर्वात जास्त परिणाम विकसित, भांडलवदार देशांवर दिसून येईल. मोठमोठे उद्योग बंद झाल्याने कामगार, मजुर रस्त्यावर येतील, त्यांच्या जीवन मरणाचा प्रश्न निर्माण होईल. जागतिक राजकारणात मोठमोठे पेच निर्माण होऊ शकतात. नोकरी-व्यवसाय यांच्या निमित्ताने अनिवासी लोकांच्या समस्या निर्माण होतील जागतिक अर्थव्यवस्था धोक्यात आल्याने जीव वाचवायचा की अर्थव्यवस्था वाचवायची हा प्रश्न समोर येईल. कोरोना संकटाला देश कशा पद्धतीने सामोरा जातो त्यावरच देशाची प्रगती ठरणार आहे. कोणत्या देशाला कोणत्या देशाने किती मदत केली यांवर आंतरराष्ट्रीय संबंध ठरतील.

प्रत्येक समस्या नविन आव्हानांना आणि संधीला जन्म देते. कोवीड-१९ या संसर्गजन्य आजाराने मानवाला जास्तीत जास्त तंत्रज्ञानाचा आधार घ्यायला शिकवले, त्याचे बरे-वाईट परिणामही अनुभवायला मिळाले परंतु पारंपरिक मानसिकता सोडून व्यक्ति ई लर्निंग Online Work From Home यांसारख्या शब्दांना आपलंसं करू लागला. यामुळे वेळ, खर्च, मजूर, प्रवासाचा ताणतणाव, प्रदुषण यांमध्ये कपात होऊन निसर्गाचा समतोल. राखला जातोय. नद्या नाले स्वच्छ झालेत ओझीनचा स्तर वाढला, वातावरणातील विषारी पदार्थ कमी झाले परंतु पक्ष्यांच्या नामशेष होणाऱ्या प्रजाती वाढीस लागल्या. काही फायदे तोटे नक्कीच झालेत. आपण त्याकडे कसे पाहतो यांवर आपले पुढील जीवन अवलंबून असणार आहे. हा सर्व विश्वाचा प्रॉब्लेम आहे परंतु यांमध्ये मानव सर्वात महत्वाचा घटक आहे. या वित्तिय आणि सामाजिक समस्यांशी मानवाला स्वतःला जुळवून घ्यावे लागेल. पृथ्वीवरच्या मानवाला नैसर्गिक आपत्तींचा सामना पुरातन काळापासून करावा लागत आहे त्यावर मात करून मानवाने आपले अस्तित्व राखले आहे आज विज्ञानातील प्रगतीने आपण फार मोठया प्रमाणात होणारी जीवितहानी निश्चितच रोखू यात वाद नाही. असे असतानाही एकवीसाव्या शतकाच्या केवळ दुसऱ्या दशकात घडलेल्या या साथीमुळे जगावर मोठे परिणाम होणार

आहेत. याचे कारण या साथीमुळे झालेली जीवितहानी हे असणार नाही, तर या साथीमुळे जगाच्या अर्थव्यवस्थेवर जे गंभीर परिणाम झाले आहेत ते असेल.^१

आजची तरुण पिढी ही अर्थव्यवस्थेचा कणा आहे शिक्षण, करियर यांमध्ये व्यस्त असणारी पिढी कोरोनाच्या हाकारामुळे चिंतित दिसून येत आहे. या रोगराईचा उदयोग कला, क्रीडा, शेती तसेच शिक्षण क्षेत्रावर देखील मोठ्या प्रमाणात परिणाम झाल्याचे दिसत आहे कोरोनाच्या संकटाने स्वयंरोजगार अथवा कौशल्याधारीत नोकऱ्यांचा विचार करण्यास भाग पाडले आहे. त्यामुळे स्पर्धा परीक्षा किंवा सरकारी नोकरी या पलीकडे नवीन वाटा शोधण्याची गरज निर्माण झाली आहे. शिक्षण प्रणालीवर आपले विचार मांडताना सुशील मुणगेकर लिहितात, कोरोनाच्या या दिवसांमध्ये संपूर्ण चर्चा ही 'ऑफलाईन ते ऑनलाईन' प्रवास एवढ्यावरच मर्यादीत आहे मुळात प्रश्न आहे की, या बदलत्या काळात वाढणाऱ्या अनिश्चिततेवर मात करता येणे, सभोवतालच्या बदलांसोबत जुळवून घेणे आणि समस्या निवारण (प्रॉब्लेम सोल्व्हिंग) यांसाठी लागणारे शिक्षण आपण मुलांना देतो का? ही सगळी प्रणाली 'ज्ञान' केंद्रित न ठेवता 'कौशल्य' केंद्रित करण्याची गरज आहे. म्हणजे ज्ञानाऐवजी कौशल्य नव्हे; ज्ञानापुरते मर्यादीत न राहता, कौशल्यसुद्धा....जिथे आव्हाने असतात, तिथे त्यांच्यावर मात करून पुढे जाण्याचे मार्ग देखील असतात. ते अंगिकारण्यासाठी इच्छाशक्ती हवी असते कोरोनाशी झगडताना जगाच्या पाठीवर प्रत्येकाकडे अशीच एक दुर्दम्य इच्छाशक्ती असल्याचा प्रत्यय येतो आहे हीच इच्छाशक्ती असल्याचा प्रत्यय येतो आहे हीच इच्छाशक्ती योग्य तऱ्हेने वापरू शकलो तर पुढच्या पिढ्या घडविण्याचे काम आपल्या हातून होईल. तसे न केल्यास आणि जुने तेच कुरवाळत बसल्यास, पुढे येणारी अस्वस्थता ही कोरोना महामारीपेक्षाही भयंकर ठरेल, हे वास्तव नाकारता येणार नाही.^२

उदयोग-व्यवसायामध्ये, प्रत्येक कामाच्या ठिकाणी कामाचे तास वाढले आहेत. त्यामानाने मोबदला कमी भेटतो यामुळे समाजात अगोदरच नैराश्य आहे त्यात कोरोना सारख्या संकटाची भर पडली आहे. छोट्या आजारांचा सामना करताना सामान्य माणूस या महागाईच्या काळात डबघाईला येतो तर कोरोना सारख्या भयंकर आजाराला सामना करणे किती कठिण

आहे याची कल्पना येते.त्यातच भारतीय अर्थव्यवस्थेत शिक्षणावर आणि आरोग्यावर जास्त खर्च केला जात नाही सध्याच्या काळात समाज खूप आर्थिक तणावामध्ये आहे. दारू मिळवण्यासाठी रस्त्यावर झुंडी वाढतात तर धर्मव्यवस्था, मंदीरं, पुजारी, अंधश्रद्धा भक्त रस्त्यावर आले आहेत. मजूरांना हातांना काम नसल्याने ते पायपीट करत आपल्या मूळ गावी परतताहेत. या विदारक चित्रणातून गरीब अजूनच गरीब होताना दिसत आहे. श्रीमंत, गरीब, मध्यम वर्ग यांमध्ये आर्थिक दरी स्पष्टपणे दिसत आहे.त्यामुळेच मानसिक ताणतणावाबरोबरच आत्महत्येचे प्रमाण वाढले आहे. इंटरनेटचा जास्तीत जास्त वापर वाढल्यामुळे सायबर गुन्हे वाढले आहेत. शिक्षण व्यवस्था सुद्धा Online Digital होत आहे काही प्रमाणात चांगले बदल घडत आहेत. नवीन बदल, नवीन आचार संहिता स्वीकारावी लागेल. चंगळवाद थांबवून शहरी व्यवस्थेचे पूर्वनियोजन करून गांधीजींनी सांगितल्याप्रमाणे स्वयंपूर्ण खेडी निर्माण केली पाहिजेत.

समारोप -

कोरोनाचा प्रभाव म्हणून Work From Home अंगीकारावं लागेल. मानवी नात्यांमध्ये असुरक्षितता निर्माण झाली त्यावर उपाय आपले आपणच शोधले पाहिजेत. ताणतणापासून मुक्ती शांती, उर्जाशक्ती मिळवण्यासाठी योगा, प्राणायाम, ध्यानधारणा, चिंतन, मनन यांचा अंगीकार केला पाहिजे आपल्या जीवनशैलीचे ते अविभाज्य भाग बनले पाहिजेत, विवेकवाद, विज्ञानवाद, धर्मनिरपेक्ष नवीन व्यवस्था यांनी एकत्र येऊन पर्यायी व्यवस्था निर्माण केली पाहिजे अनावश्यक वस्तु व सेवांचा मोह टाळून शिस्त, तंत्रज्ञान, शिक्षण, ज्ञान, कौशल्य, आरोग्य यांचा जर अंगीकार केला तर भारत स्वयंपूर्ण आणि महासत्ता होईल. आज मितीला मानव निर्मित यंत्रणा जरी काही अंशी बंद पडल्या असल्या तरी माणूस माणसाला तारुण नेत आहे हे भारतीय समाजव्यवस्थेचे सर्वात मोठे वैशिष्ट्य आहे.

संदर्भ ग्रंथ :

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२. मुणगेकर सुशील, 'केवळ ज्ञान की कौशल्यसुद्धा?', लोकसत्ता, संपादकीय, गुरुवार १४ मे २०२०, पृ.७.

कोरोनाचे भारतीय शिक्षणव्यवस्थेवरील परिणाम व त्यावरील उपाय

डॉ. पांडुरंग भोसले

एस.एम. जोशी कॉलेज, हडपसर, पुणे

प्रास्ताविक -

प्रत्येक शतकाच्या पहिल्या-दुसऱ्या दशकात जागतिक पातळीवर काहीना काही अरिष्टे येऊन जागतिक पातळीवर उलथापालथी झाल्याचा इतिहास आहे. अनेक जीवघेण्या आजारांनी कोटयवधी जीवांना प्राणाला मुकावे लागले आहे. एकविसाव्या शतकाच्या उंबरठ्यावर २०२० साल हे 'कोरोना' नावाचे अरिष्ट घेऊन आले. हे संकट मानवनिर्मित की नैसर्गिक याची खलबते जगभर सुरु आहेत. सर्वसाधारणपणे अपघात झाल्यानंतर अपघात कसा झाला यापेक्षा त्याचा परिणाम काय झाला, असे अपघात होऊ नयेत यासाठी उपाय काय? किंवा अपघात टाळण्यासाठी दक्षता कोणती घ्यावी लागेल? 'कोरोना' सारखी आपत्ती मानवनिर्मित असेल तर त्या मानसिकतेचे काय? ही मानसिकता बदलता येईल काय? जागतिक पातळीवर महासत्ता बनण्यासाठीचा हा उपाय जगाला परवडेल काय? जगात मानवी नरसंहार घडून जगातील माणूसच संपणार असेल तर महासत्ता कोण आणि कसे होणार? हे आणि यासारखे विविध प्रश्न आज सर्वांनाच भेडसावत आहेत.

हे सर्वच प्रश्न अंतर्मुख करणारे आहेत. असे असले तरी पौराणिक काळापासून जगाच्या इतिहासात अशा अनेक उलथापालथी झाल्या तरी माणूस टिकून आहे. यातूनही मार्ग निघेल. पण त्याच्या सद्यकालीन आणि दीर्घकालीन परिणामांचा विचार करून काही बदल करावे लागतील. ते बदल आत्मसात करून त्यावर मात करावी लागेल. एक शिक्षक या नात्याने विचार करावयाचा झाल्यास शिक्षण, विद्यार्थी व शिक्षक या घटकांचा विचार महत्त्वपूर्ण ठरतो. कोरोनाचा या घटकांवर कोणता परिणाम झाला आहे, कोणते बदल करावे लागतील, कोणती दक्षता घ्यावी लागेल या आणि यासारख्या आनुषंगिक प्रश्नांचा त्यावरील उत्तरांपर्यंत पोहोचण्याचा हा प्रयत्न आहे.

या घटकांकडे वळण्यापूर्वी 'कोरोना' पासून बचावासाठी काय करणे गरजेचे आहे तर किमान काही अंतर दूर राहणे आवश्यक आहे. संपूर्ण चेहरा झाकणे वा किमान तोंड व नाक मास्क वा कपड्याने झाकणे आवश्यक आहे. डाळ्यांवाटेही हा आजार शरीरात प्रवेश करतो असे आता पुढे येत आहे. एकमेकांच्या प्रत्यक्ष संसर्गातून वा संसर्ग झालेल्या व्यक्तीने

ज्या वस्तूला स्पर्श केला असेल त्या वस्तूला दुसऱ्या व्यक्तीने स्पर्श केला असता हा आजार पसरतो आहे. हे सर्व तपशील देण्याचा हेतू हा की, विद्यार्थी, पुस्तके, उत्तरपत्रिका, सुपरव्हिजन, अध्यापन या निमित्ताने आजच्या प्रचलित पारंपरिक शिक्षणव्यवस्थेला धक्का बसला आहे. त्यावर पर्यायी मार्ग काढणे अपरिहार्य झाले आहे. या सर्व गोष्टींचा विचार करता प्रथम शिक्षणाचा विचार करणे क्रमप्राप्त आहे.

पूर्वीच्या काळातील गुरुकुल पद्धती जाऊन आज खडू-फळा शिक्षणपद्धती आली आहे. आजच्या माहिती-तंत्रज्ञानाच्या युगात अध्ययन अध्यापन पद्धतीत आमूलाग्र बदल होत आहेत. इथे बसून जगातील इतर देशातील पदव्या-पदविका कोर्सेस पूर्ण करू शकत आहोत हे सर्वसामान्य आहे. असे असले तरी भारतीय शिक्षणव्यवस्थेचा विचार करताना सत्तर टक्क्यांपेक्षा अधिक लोक खेड्यात राहतात याचाही विचार पुढे येतो.

आज भारतात कला, वाणिज्य, विज्ञान, मेडिकल, इंजिनिअरींग, संगणक आणि अशा विविध पातळ्यांवर शिक्षण दिले जात आहे. जेथे मर्यादित विद्यार्थी संख्येचे शिक्षणक्रम आहेत तेथे उदा. मेडिकल, इंजिनिअरींगसारख्या शिक्षणात सोशल डिस्टन्सिंग आणि सर्वच पातळ्यांवर दक्षता घेऊन शिक्षणप्रणाली सुरळीत ठेवणे शक्य आहे. तथापि तेथेही वस्तूना स्पर्श करणे आणि एकच वस्तू हाताळणे या गोष्टींचा विचार करावा लागणार आहे. प्रत्यक्ष प्रात्यक्षिके चालू असणाऱ्या ठिकाणी असणारी अंतर्गत रचना बदलावी लागणार आहे. सॅनिटायझर, मास्क आणि हातमोजे विज्ञान शाखा, मेडिकलखेरील इतर ठिकाणी फारसा वापर होताना दिसत नाही. त्याचा वापर इतर शाखांमध्येही करावा लागणार आहे. प्रश्न आहे कला, वाणिज्यसारख्या शाखांचा जेथे एका वर्गात ४० ते ५० पासून १०० ते १५० विद्यार्थी बसत असतात. या विद्यार्थ्यांचे डिस्टन्सिंग कसे पाळणार. बॅचेस करायच्या झाल्यास एका वर्गात ४० बॅचेस असतील तर तीन फुटांचे अंतर कसे राखता येणार. कॉलेजमध्ये प्रथम वर्षाच्या एका वर्गात सर्वसाधारणपणे ३०० विद्यार्थी असतील तर त्याचे नियोजन कसे करणार. एका वर्गाच्या अनेक बॅचेस कराव्या लागणार. त्या प्रमाणात शिक्षकांची नेमणूक करावी लागणार. वरील

संख्येच्या प्रमाणात संबधित महाविद्यालयांच्या इमारती व वर्गखोल्या असतील तर बदलत्या गरजेनुसार तेवढ्या प्रमाणात वर्गखोल्या बांधणे सर्वच संस्थाचालकांना कितपत शक्य होईल? वर्ग खोल्या बांधल्या सर्व व्यवस्था केली तर अध्यापनाच्या वेळापत्रकातही मोठा बदल होईल. सहा आणि आठ तासांऐवजी शाळा-महाविद्यालयांची वेळ १० ते १२ वा त्यापेक्षाही अधिक करावी लागेल. हे कितपत आणि कसे शक्य होईल तो पुढील काळच ठरवेल. कोरोनासारख्या महामारीपासून आपणाला जिवंत राहायचे असेल तर हे करावे लागेल.

भौतिक सुविधांची पूर्तता केली तरी प्रश्न उरतो मूल्यमापनाचा आज विद्यार्थ्यांची लेखी परीक्षा घेतली जाते. लाखो विद्यार्थी आणि लाखो उत्तरपत्रिका या उत्तरपत्रिकांमधील उत्तरे लिहिताना लाखो पाने विद्यार्थ्यांकडून हाताळली जाणार. त्या उत्तरपत्रिका शिक्षक तपासणार. परीक्षा चालू असताना विद्यार्थ्यांच्या उत्तरपत्रिकेवर सही करण्यासाठी, पुरवण्या देण्यासाठी शिक्षकाला विद्यार्थ्यांच्या जवळ जावे लागते. त्यावर काही वेगळा पर्याय शोधणे गरजेचे ठरेल.

अनेक वर्गांमधील विद्यार्थ्यांच्या गृहपाठाच्या व टेस्ट, टयुटोरिअलच्या, प्रात्यक्षिकांच्या वहया, तपासाच्या लागतात त्याला काही पर्याय शोधावे लागतील. 'खडू फळा' अध्यापन पद्धती कालबाहय ठरवत आय.सी.टी., पी.पी.टी. सारख्या अनेक अध्यापन पद्धती आज वापरल्या जात आहेत. आज जगातील विकसित राष्ट्रांमध्ये गुगल क्लासरूम, ऑनलाईन टिचींग सुरु आहे. हे खरे असले तरी आपणालाही काळानुरूप बदलावे लागेल यात शंका नाही. 'संकटाचे संधीत रूपांतर' करण्याची क्षमता विकसित करावी लागेल.

'कोरोना' हे संकट सर्वच घटकांवर दीर्घकालीन परिणाम करणारे आहे. असे तज्ज्ञांचे मत आहे. त्यामुळे सर्वात प्रथम प्राथमिक ते उच्च शिक्षणापर्यंत सर्वच शिक्षकांना आधुनिक शिक्षणाची गरज ओळखून तांत्रिक शिक्षण दिले पाहिजे. त्यासाठी तांत्रिक शिक्षण देणारी प्रशिक्षण केंद्रे तयार करून शिक्षकांना प्रशिक्षण दिले पाहिजे. पारंपरिक शिक्षण पद्धतीत बदल करून नव्या बदलाला सामोरे जाण्यासाठीची मानसिकता तयार करणे गरजेचे आहे. प्रशिक्षित शिक्षकांकडून दिले जाणारे शिक्षण विद्यार्थ्यांमध्ये रुजविण्यासाठी विद्यार्थीही तेवढाच समर्थ बनविणे आवश्यक आहे. ॲन्ड्रॉइड मोबाईल, लॅपटॉप, कॉम्प्युटर, टॅब यासारख्या आधुनिक तांत्रिक उपकरणांना हाताळता यावे यासाठी विद्यार्थीही तेवढाच आर्थिक सक्षम असणे अभिप्रेत आहे. मात्र ७० टक्क्यांपेक्षाही अधिक लोक खेड्यात रहात आहेत. त्यातही दुर्गम-अतिदुर्गम भागात राहणाऱ्या लोकांपर्यंत अजून लाईट-पाणीसारख्या सुविधा नाहीत. काही ठिकाणी कित्येक तास लाईट-पाणीसारख्या सुविधा नाहीत. काही ठिकाणी कित्येक तास लाईट नसते. दुर्गम भागात मोबाईल

इंटरनेटला रेंज मिळत नाही. अशा परिस्थितीत भारत सरकार व राज्यांची सरकारे यांनी मायक्रो प्लॅनिंग करून नियोजन करणे आवश्यक आहे. अन्यथा 'उजाडले पण सूर्य कुठे आहे' म्हणण्याची वेळ येईल. ग्रामीण भारतातील शिक्षणाला गती दिल्याशिवाय तरणोपाय नाही.

तांत्रिक शिक्षण आणि सोशल डिस्टन्सिंगचा विचार करून शाळा अंतर्बाह्य बदलायची असेल तर शिक्षण संस्था चालकांवर आर्थिक ताण येणार आहे. तो ताण भरून काढण्यासाठी विद्यार्थ्यांची फी वाढ अटळ आहे. साखरसम्राटांसारखे गल्लेभरू शिक्षणसम्राट निर्माण होत आहेत. शिक्षण हे व्यवसायामध्ये समाविष्ट केल्याने फायदा आणि नफेखोरीची मानसिकता नाकारता येणार नाही. फीचा वाढता बोजा सहन करण्याची क्षमता पालकांमध्ये असणे अपेक्षित आहे. नसेल ते या शिक्षणप्रवाहापासून दूर फेकले जाणार हे निश्चित.

कोरोनाच्या भितीने जगभरातून करोडो नोकरदार स्थलांतरित झाले आहेत. करोडो नोकरदारांच्या नोकऱ्या जाण्याची भिती आहे. भारतातही लाखोंच्या संख्येने लोक एका राज्यातून दुसऱ्या राज्यात स्थलांतरित होत आहेत. त्याचाही शिक्षणव्यवस्थेवर म्हणजे पर्यायाने शाळा-महाविद्यालयांमधील विद्यार्थी संख्येवर काही परिणाम होतोय का ते पुढील काळात लक्षात येईल.

शिक्षणव्यवस्थेतील अत्यंत महत्त्वाचा घटक विद्यार्थी विद्यार्थ्यांला या सर्व बदलांना सामोरे जाण्यासाठी सक्षम करणे आवश्यक आहे. बी. ए. भाग २ या वर्गाला पर्यावरणशास्त्र हा विषय जसा सक्तीचा केला आहे. तसा आधुनिक तंत्रज्ञानाचा अध्ययनासाठी वापर करणारा विषय प्राथमिक शिक्षणापासून समाविष्ट करणे गरजेचे आहे.

शाळा-महाविद्यालयांमधील विद्यार्थ्यांसाठी सॅनिटायझरची सुविधा देता येणे शक्य होईल मात्र मास्क, हॅण्डग्लोज यांचा सातत्याने वापर कितपत शक्य आहे. विकसित देशातील कित्येक शाळांमध्ये प्रवेशद्वारावरच सॅनिटायझरचा वापर दिसतो. लावलेला मास्क प्रवेशद्वारावरच डस्टबिनमध्ये टाकून दुसरा मास्क दिला जाताना दिसते. भारतात सर्व शाळा-महाविद्यालयांना वा पालकांना कितपत शक्य आहे त्याचा विचार करावा लागेल. त्यावरील उपाय शोधावे लागतील.

तांत्रिक सुविधा उपलब्ध असणारे आणि नसणारे यांच्यात एक दरी निर्माण होण्याची शक्यता नाकारता येत नाही. त्यामुळे शिक्षणातील आमूलाग्र बदल पचवून समर्थ भारत बनवायचा असेल तर शिक्षणासाठीची मोठी आर्थिक तरतूद करणे अपेक्षित आहे.

समारोप -

जागतिक महामारीला कारणीभूत ठरणारा कोरोना

जगातील मानवजातीला अंतर्मुख करणारा आहे. जगण्याची समिकरणे बदलविण्यास कारणीभूत ठरविणारा आहे. इटलीसारख्या देशातील लोकांनी घरातील पैसा रस्त्यावर फेकून एकीकडे आपला असंतोष व्यक्त केला तर दुसरीकडे आपल्या अस्तित्वाशिवाय दुसरे सर्व व्यर्थ आहे हेच दाखवून दिले.

एकूणच काय शिक्षणाने माणूस ज्ञानी आणि सुसंस्कारित होतो असे म्हटले जाते. त्यामुळे कोरोनाच्या पार्श्वभूमीवर शिक्षण, शिक्षणव्यवस्था, विद्यार्थी आणि शिक्षण यांचा सहानुभूतीपूर्वक विचार करून शिक्षणाच्या अंतर्बाहय बदलाला सक्षमपणे सामोरे जाण्यासाठी सज्ज झाले पाहिजे हे निश्चित.

कोरोना (कोव्हीड-१९) संबंधाने करण्यात आलेल्या टाळेबंदीच्या परिणामांचा सामाजिक व राजकीय मुद्यांच्या अनुषंगाने अभ्यास

डॉ.रविशंकर भगवानराव चव्हाण

सहाय्यक प्राध्यापक, राज्यशास्त्र विभाग,

नानासाहेब य. ना. चव्हाण कला, विज्ञान व वाणिज्य महाविद्यालय, चाळीसगाव, जि.जळगाव

वसुधैव कुटुंबकम् अर्थात - संपूर्ण विश्व हेच एक मोठे कुटुंब आहे अशी हाकाटी पिटणाऱ्या वैश्विकरणाच्या संकल्पनाकारांनी कल्पनाही केली नसेल अशी गंभीर व चिंताजनक परिस्थिती कोरोना प्रादुर्भावाने संपूर्ण जगासमोर निर्माण केली आहे. आज दिनांक १९ मे २०२० पर्यंत जगभरात या कोरोना विषाणूच्या महामारीचा एकूण ४८ लाख ६० हजार २६० लोकांना प्रादुर्भाव झाला आहे. तर आतापर्यंत ३ लाख १८ हजार ६८७ लोकांना आपले प्राण गमवावे लागले आहेत. तर १८ लाख ८८ हजार ६९४ रुग्ण बरे झाले आहेत. भारतातील कोरोना रुग्णांची संख्या १ लाख ३२६ एवढी झाली असून त्यातील ३ हजार १५६ लोकांना आपले प्राण गमवावे लागले आहेत. तर बरे झालेल्यांची संख्या ३९.२३३ एवढी आहे.

संपूर्ण जगाला एकाच वेळी वेठीस धरणारी इतकी गंभीर व महाभयानक समस्या क्वचितच यापुर्वी कधी जगापुढे निर्माण झाली असेल. ही महामारी आणि त्यातून लादण्यात आलेल्या टाळेबंदीने संपूर्ण जगाच्या औद्योगिक, आर्थिक, सामाजिक, शैक्षणिक, आरोग्य, रोजगार या क्षेत्राला व त्याचा परिणाम म्हणून राजकीय क्षेत्राला जोरदार झटके देत भयंकर प्रभावी करून टाकले आहे. त्यामुळे भारताबरोबरच स्वतःला जागतिक महासत्ता म्हणवून घेणाऱ्या अर्थव्यवस्थांचे कोलमडणे व आरोग्य व्यवस्थेतील संकटकाळात सामना करण्याचा अपुरेपणा व अव्यवस्था प्रकर्षाने जगासमोर आली आहे. त्यामुळे या भौतिक भांडवली पायावर उभारलेल्या व फोफावलेल्या स्वयंघोषित व जगमान्य अर्थव्यवस्था किती ठिसूळ, सामाजिक, आर्थिक व आरोग्यविषयक पायावर उभ्या आहेत. अर्थव्यवस्था व उद्योग व्यवसाय व जिवनव्यवहार महिना-२ महिने बंद केल्यास टिकून राहण्याची क्षमता अमेरिका व युरोपसहित कोणत्याच देशात नाही. हे अमेरिकन राष्ट्राध्यक्ष डोनाल्ड ट्रंप यांच्या 'टाळेबंदी न केल्यास कोरोना विषाणूच्या प्रादुर्भावाने लोक मरतील व टाळेबंदी केल्यास बेरोजगारी, उपासमार व भुकेने लोक मरतील.' या आगतिक वक्तव्यातून दिसून येते.

कोरोना महामारी व त्यातून लादण्यात आलेल्या टाळेबंदीने जागतिक, औद्योगिक व आर्थिक दुरावस्थेला चालना मिळाली असून जगाची अर्थव्यवस्था ठप्प होऊन

कुंठितावस्थेकडे वाटचाल करित आहे. हा एका अर्थाने जागतिकीकरणाचा उलट्या दिशेने प्रवास सुरु झाला आहे. भारतात असंघटित क्षेत्रात जवळपास ९३% कामगार काम करित असून या टाळेबंदी व तत्सम अनेक कारणांच्या परिणामस्वरूप चाळीस कोटी कामगार रोजगार गमावल्याने दारिद्र्याच्या खाईत लोटले जाण्याची भिती निर्माण झाली आहे. तर या वर्षाच्या दुसऱ्या तिमाहीत जगभरात १९.५० कोटी लोकांचे पूर्ण वेळाचे रोजगार जाणार असून जगातील कामाचे ६.७ टक्के तास कमी होणार आहेत असे संयुक्त राष्ट्रांच्या अंतरराष्ट्रीय कामगार संघटनेने म्हटले आहे व त्यांच्या 'आय.एल.ओ. मॉनिटर सेकंड एडिशन कोव्हीड-१९ अँड दि वर्ड ऑफ वर्क' या अहवालात म्हटले आहे की, या कोरोना व टाळेबंदीचे जगावर दुसऱ्या महायुद्धाइतकेच भीषण परिणाम झाले असून कामगार व उद्योगांपुढे भयंकर संकट उभे राहिले असून विकसित व विकसनशिल देशांच्या अर्थ व्यवस्थांना मोठा फटका बसला आहे. असंघटित क्षेत्रातील लाखो लोक आपले रोजगार गमावण्याच्या मार्गावर असून ब्राझील, नायजेरिया, भारत जास्त असंघटित कामगार असलेल्या देशांची परिस्थिती रोजगाराबाबत गंभीर होण्याची व दारिद्र्यात वाढ होण्याची शक्यता आहे. जगात आखाती देशातील ८.१ टक्के तासांचे काम घटणार असून ५० लाख पूर्णवेळ रोजगार जाणार आहे. युरोपात ७.८ टक्के तासांचे काम घटणार असून १.२ कोटी पूर्णवेळ रोजगार जाणार आहे तर आशिया व पॅसिफिकमध्ये ७.२ टक्के तासांचे काम घटणार असून १२.५० कोटी पूर्णवेळ रोजगार संपुष्टात येण्याची शक्यता आहे. सेंटर फॉर मॉनिटरिंग इंडियन इकोनॉमी (सी.एम.आय.ई.) ने कोरोना व टाळेबंदीतोर भारतीय अर्थव्यवस्थेवर विपरीत परिणामांचे अंदाज बांधले असून टाळेबंदी लागू झाल्याच्या महिन्यात देशातील बेरोजगारीने गेल्या ४३ महिन्यांचा उच्चांक गाठल्याचे व बेरोजगारीचा दर ८.७४ टक्के झाल्याचे म्हटले असून हा ऑगस्ट २०१६ नंतरचा कमाल दर आहे, तर निश्चलनीकरणानंतरचा हा सर्वाधिक दर आहे. या संस्थेच्या आकडेवारीनुसार शहरी भागातील बेरोजगारीचा दर ९.३५ टक्के तर ग्रामीण भागातील बेरोजगारीचा दर ८.४५ टक्के नोंदला गेला आहे. सर्वाधिक बेरोजगारीच्या दरातील नोंद उत्तर-पूर्व

भारतातील त्रिपुरा राज्यात आहे, तेथील बेरोजगारीचा दर मार्च २०१९ मध्ये २९.९ टक्के नोंदला गेला आहे तर सर्वात कमी बेरोजगारीचा दर दक्षिणेतील पडुचेरी येथील २.१ टक्के राहिला आहे. रोजगाराच्या शोधात असलेल्या बेरोजगारांची संख्या मार्च २०१९ मध्ये ३.७९ कोटी राहिले आहे. हे प्रमाण ऑक्टोबर २०१६ नंतरचे सर्वाधिक प्रमाण आहे. निश्चलनीकरणपूर्वी ३.८५ कोटी बेरोजगार नोकरीच्या शोधात होते.

सन २००८ ची जागतिक मंदी येण्यापूर्वी, ती येण्याचे भाष्य करणाऱ्या व जागतिक अर्थव्यवस्थेतील सर्व प्रकारच्या अतिरेकावर कोरडे ओढणाऱ्या आंतरराष्ट्रीय ख्यातीच्या नुरिएल रुबिनी या अर्थशास्त्रज्ञ यांनी कोरोना पश्चात जागतिक परिस्थितीचे गांभीर्य ओळखून त्यावर द गार्डियन मधील आपल्या लेखात भाष्य केले आहे. त्यात ते म्हणतात की, अर्थव्यवस्था ज्या वेगाने कोसळली त्याच वेगाने सावरणार असेल तर 'V' हे अक्षर, काही काळ अर्थव्यवस्था तशीच पडून नजीकच्या काळात, पण निश्चितपणे सावरणार असेल तर 'U' हे अक्षर, तर अर्थव्यवस्था पडलेल्या अवस्थेत अनिश्चित काळ राहण्याची भिती असल्यास 'L' हे अक्षर वापरले जाते. रुबिनी यांच्या मते कोरोना पश्चात जागतिक अर्थव्यवस्था 'L' अक्षराचा प्रवास करेल अर्थात अनिश्चित काळ मंदीतच राहील. जागतिक मंदीची कोरोना व टाळेबंदी बरोबरच अर्थसंकल्पीय तुटी, थकीत कर्ज आणि उद्योगांची दिवाळखोरी, विविध राष्ट्रांचे आयात-निर्यातीबाबत स्वसंरक्षणात्मक पवित्रे, मालाला उठाव नसल्याने अर्थव्यवस्थांच्या सर्वच आघाड्यांवर निर्माण झालेली कुठितावस्था ही कारणे रुबिनी यांनी सांगितली आहेत. तर त्याच्या परिणामस्वरूप जागतिक अर्थव्यवस्थेतील यांत्रिकीकरणाला व स्वयंचलितीकरणाला मोठा वेग येऊन नवीन रोजगार निर्मिती तर नाहीच पण जुने रोजगार जावून वेतन मानावर व क्रयशक्तीवर परिणाम होईल तसेच अमेरिका व चीन मध्ये नवीन शीतयुद्धाला चालना मिळून आपल्या देशातील उद्योगधंदे व रोजगारावर बाहेरच्या व्यापार युद्धाचा परिणाम होवू नये यासाठी आर्थिक व्युत्पन्न केल्या जावून राष्ट्रांमधील स्वसंरक्षणातील मानसिकता वाढीला लागेल. या परिस्थितीत जगातील अनेक देशात खरी लोकशाही बँकफुटवर जावून एकाधिकार गाजविणाऱ्या व लोकानुनय करणाऱ्या नेत्यांची चलती राजकीय पटलावर निर्माण होईल. स्वदेशी मालाचा आग्रह बाहेरून येऊन स्थानिकांच्या रोजगारावर गदा आणणाऱ्या स्थलांतरीतांच्या विरुद्ध घोषणा देत हे लोकानुनयी नेते सर्वत्र आपली पकड घट्ट बसवतील. अर्थात कोरोना पश्चात जगात आर्थिकच नव्हे तर राजकीय व लष्करी शक्तींचे पुनर्गठन होऊ घातले आहे. अशा परिस्थितीत भारतासारख्या विकसनशील राष्ट्राला राष्ट्रहितासाठी वरीलपैकी कोणत्याही गटात समाविष्ट

न होता व जवळीक न दाखवता आपल्या देशातील कोट्यावधी कामगार कष्टकऱ्यांच्या व पर्यायाने देशाच्या हितासाठी या सर्व तरुणांना सामावून घेणारी रोजगार केंद्री अर्थव्यवस्था जाणीवपूर्वक उभारावी लागेल. जेणेकरून बाहेरच्या आर्थिक आगीची झळ आपल्या अर्थव्यवस्थेला व नागरीकांना कमीत कमी सोसावी लागेल.

कोरोनोत्तर परिस्थितीत भारताच्या संदर्भाने पुढील तीन शक्यता किंवा परिणाम संभवत आहेत. त्यात एक तर कोरोना विषाणू व त्यातून आलेल्या टाळेबंदी पश्चातच्या जगाचे व अर्थ व जिवनव्यवहार बहुतांशपणे वेगळे वळण घेतील. दुसरे बदलत्या जागतिक वातावरणात चीनचे महत्त्व कमी होवून जागतिक सत्ता संबंधाची नवी संरचना उदयास येईल व तिसरे म्हणजे वैश्विक अर्थराजकारणात निर्माण झालेली पोकळी भरून काढण्याची सुवर्णसंधी या परिस्थितीत भारताकडे येवू शकते. कोव्हिड-१९ व टाळेबंदीनंतरचे संपूर्ण विश्वाचे अर्थ व जिवनव्यवहार कमालीचे बदललेले असतील ही सर्वमान्य प्रबळ शक्यता असली तरी या बदलांचा सकारात्मक व नकारात्मक फायदा अथवा परिणाम कोणत्या वर्गाला व देशाला होईल हे आत्ताच सांगणे घाईचे ठरेल. तरीही सामान्यपणे या बदललेल्या परिस्थितीचा सर्वाधिक व तातडीचा फटका समाजातील हातावर पोट असणाऱ्या उपेक्षित, वंचित, असंघटित व अकुशल कामगार वर्गाला बसला आहे व भविष्यातही बसणार आहे. या परिस्थितीत सर्वसामान्यांचे जगणेच अंधःकारमय व प्रभावीत झाले आहे. भारतासहीत जगाची कुठित झालेली अर्थव्यवस्था पूर्व पदावर येण्यास किंवा पुनर्रचित होण्यास दोन-तीन वर्षांपासून दहा वर्षांपर्यंतचा कालावधीही लागू शकतो ही पुनर्रचित अर्थव्यवस्था अर्थातच समाजातील आहरे वर्गाच्या हिताची व नाहीरे वर्गाच्या, उपेक्षितांच्या, असंघटित कामगारांच्या अहिताची असण्याचीच व या वर्गासाठी प्रचंड बेरोजगारीचे जागतिक संकट व अनिश्चितता निर्माण करणारी ठरणार आहे.

सामान्यतः २१व्या शतकाच्या सुरुवातीपासूनच अर्थव्यवस्थेत मोठ्या प्रमाणातील तंत्रज्ञानात्मक बदलास सुरुवात झाली असून कृत्रीम बुद्धीमत्ता (AI), ब्लॉकचेन, मशीन लर्निंग यासारख्या संकल्पना, औद्योगिक क्रांती ४.० च्या दिशेने जगाची वाटचाल घेऊन जातच होत्या पण त्याची गती काहीशी टप्याटप्याने व मर्यादीत होती. कोव्हिड-१९ व त्या अनुषंगाने आलेल्या टाळेबंदी पश्चातच्या जगात ही गती नाहीरे वर्गाला बिलकुल सहन न होणाऱ्या राक्षसी वेगाने होणार असून या भांडवलकेंद्री व तंत्रज्ञानकेंद्री पुनर्रचित व्यवस्थेच्या संपूर्ण परिघाबाहेर हा नाहीरे, उपेक्षित, वंचित व असंघटित कामगार वर्ग फेकला जाणार आहे. ही पुनर्रचित व्यवस्था भारतासारख्या विकसनशील राष्ट्रातील उपेक्षित वंचितांचे जीवन विश्वच उद्ध्वस्त करणारी ठरणार आहे. औद्योगिक क्रांती ४.०

च्या या गतीशिल वाटचालीमुळे हे पुनर्रचनात्मक बदल पचवण्याची क्षमता व तयारी असलेले पश्चिम व उत्तर युरोपातील देश, अमेरिका व कॅनडा, इस्त्राईल, जापान व तैवान, सिंगापूर व दक्षिण कोरिया, ऑस्ट्रेलिया व न्युझीलँड हे मुठभर प्रस्थापित देश तसेच त्यापाठोपाठ चीन, रशिया व सौदी-युएई सारख्या श्रीमंत देशातील मानवी समाज तथा वर्ग यांना बदलत्या अर्थ राजकारणात महत्वाचे व मक्तेदारी लाभार्थ्यांचे स्थान प्राप्त होणार असले तरी भारतासारख्या अर्धविकसित किंवा विकसनशिल राष्ट्रांना स्वतःच्या प्रचंड लोकसंख्येच्या रोजगाराच्या प्रश्नाला या परिस्थितीशी ताडून पहावे लागेल. अर्थात कोव्हिड-१९ पश्चातचे जग अधिक भांडवलवादी जग (High Capitalist World) म्हणून पुढे येण्याची शक्यता असून ही बाब भारतासहित जगभरातील आर्थिक विषमतेला व मानवतावादी समाजाला वाऱ्याच्या वेगाने एका उच्च टकमक टोकाला घेऊन जाणारे ठरणार आहे. हे जग मानवतावादी शाश्वत मुल्यांवर व सर्वसमावेशकतेवर आधारलेले नसेल तर राक्षसी नफ्याच्या महत्वाकांक्षेवर पोसलेले असेल.

कोव्हिड-१९, टाळेबंदी व अर्थ औद्योगिक सत्ताकेंद्र : चीन, भारत व पश्चिमी राष्ट्रे -

अर्थ उद्योगातील प्रभावाचा वापर करून जागतिक सत्ताकारणात वर्चस्व प्रस्थापित केलेल्या चीनची (नैतिक) पत मोठ्या प्रमाणात घटून चीनचे जागतिक अर्थकारणातील स्थान व दबदबा काहीसा डळमळीत झाला आहे. एक तर जागतिक अर्थव्यवस्थेच्या कुंठितावस्थेमुळे चीनच्या महत्वाकांक्षी व भविष्यकेंद्री बेल्ट व रोड महाप्रकल्पाला गतीरोध निर्माण झाला आहे. त्यातच चीनकडून व चीनकेंद्री अर्थसंस्थांकडून कर्ज घेतलेले देश कर्जफेडीस असक्षम ठरणार आहेत. त्यामुळे चीनने वर्ष २०३० हा महत्त्वपूर्ण टप्पा मानून आखलेली आर्थिक-औद्योगिक व त्या आडूनची राजकिय वर्चस्वाची गणिते फलद्रुप होणार नाही. अर्थात चीनची अर्थ-सामरीक पकड लगेचच सैल होणार नाही. यातील कळीचा मुद्दा म्हणजे कोव्हिड-१९ व त्यातून आलेल्या टाळेबंदीने जागतिक औद्योगिक उत्पादन प्रचंड घसरले असले तरी चीनची उत्पादन क्षमता मागील महिन्यापासून झपाट्याने रुळावर येत आहे. अर्थात या परिस्थितीचा म्हणावा तितका फटका चीनला बसलेला नाही. याउलट चीनमधील औद्योगिक उत्पादन बंद पडल्याचा म्हणावा तसा फायदा भारतासारख्या गुंतवणुकीच्या स्थलांतराची आशा बाळगणाऱ्या विकसनशिल देशाला अद्याप घेता आलेला नाही. याउलट चीनने मात्र या आपत्तीला इष्टापत्तीत रुपांतरीत करित मार्च महिन्यापासून भारतासह इतर देशात औद्योगिक उत्पादन मंदावण्याच्या काळात स्वतःला पुन्हा औद्योगिक उत्पादन प्रक्रियेत पुनर्रस्थापित करत कोरोना विषाणूचा सामना करणाऱ्या

देशापैकी भारतासहित अन्य १२५ देशांना उपचारात्मक व संरक्षणात्मक वैद्यकीय सामग्री पुरविली आहे. पश्चिम व पूर्व युरोपसह आफ्रिका खंड व पार्शियन आखातातील एकूण १५ पैकी अधिक देशात चीनने आपले वैद्यकीय मदतगट पाठविले आहेत. चीनचा प्रसिद्ध उद्योजक जॅक मा याने कोव्हिड-१९ विरुद्धच्या लढाईसाठी विकसनशिल व गरीब देशांना भरघोस आर्थिक मदत देण्याचे जाहीर केले आहे. यातून चीनची औद्योगिक उत्पादन क्षमता, कार्यसंस्कृती, मजबूत अर्थ औद्योगिक पाया व संकटकालीन परिस्थितीतही जगभरात राजनैतिक पेरणी करण्याची तीव्र इच्छाशक्ती दिसून येते. या संकटकालीन परिस्थितीतही चीन जागतिक अर्थकारणाच्या पटलावर मजबूत पाय रोवून उभा राहण्याच्या तयारीत आहे. याउलट चीनची ही पकड दिल्ली करण्यासाठी अमेरिका, जापान, दक्षिण कोरिया, जर्मनी, फ्रान्स व ब्रिटन हे देश आपली चीन मधील गुंतवणूक कमी करण्याच्या प्रक्रियेत गुंतले आहेत. चीनमधील निर्गुंतवणुकीचा हा वेग वाढला तरी जागतिक अर्थ व्यवस्थेची पुनर्रचना होवून नवी अर्थ व्यवस्था अस्तित्वात येण्यास किमान दहा वर्षांचा कालावधी लागू शकेल. या संभाव्य पुनर्रचनेत भारताला अनेक संधी असल्यातरी चीनमधील प्रगत देशांची गुंतवणूक आपोआप भारतात स्थलांतरीत होणे केवळ भाबडा आशावाद ठरेल. एक तर प्रगत देश स्वतःच्या देशात गुंतवणूक वाढवण्यास उत्सुक असून नजीकच्या काळात चीन मध्ये नवीन गुंतवणूक नाही केली तरी जुनी गुंतवणूक लगेच काढून घेणे वाटते तितके सोपे नाही. त्याचबरोबर चीनमधून इतरत्र हलविण्यात येणारी गुंतवणूक आपल्याकडे आकर्षित करण्यासाठी भारताबरोबरच बांगलादेश, व्हिएतनाम, इंडोनेशिया ते तुर्कस्थान व ब्राझील ते अल्जेरिया असे अनेक देश स्पर्धेत आहेत. या स्पर्धेत आता पूर्व युरोप बरोबरच आखातातील देशही उतरण्याची शक्यता आहे. या स्पर्धेत पश्चिम युरोपातील औद्योगिकदृष्ट्या प्रगत देश कृत्रिम बुद्धिमत्ता, मशीन लर्निंग, ब्लॉकचेन यासारख्या आधुनिक तंत्रज्ञानाचा वापर औद्योगिक क्रांती ४.० यशस्वी करण्यासाठी करून जागतिक अर्थ उद्योग व राजकारणाचे सत्ताकेंद्र स्वतःकडे खेचून घेण्याच्या तयारीत आहेत. अशा जागतिक परिस्थितीत भारतासारख्या विकसनशील राष्ट्राला नव्या अर्थ-औद्योगिक समीकरणांची जुळवाजुळव करून व भारतावर सकारात्मक आर्थिक व सामाजिक परिणाम करणाऱ्या नव्या संधी शोधून कोरोनोत्तर जागतिक परिणामांना व त्यातून होणाऱ्या बदलांना सामोरे जावे लागेल.

कोरोना (-१९) व टाळेबंदी आणि मजूर कष्टकऱ्यांची कुचंबणा/हाल व लोकशाहीची कुचंबणा -

कोरोना महामारी व त्यातून करण्यात आलेली टाळेबंदी यातून देशातील विविध वृत्तपत्रात व वृत्तवाहिन्यांवर स्थलांतरीत मजूर-कष्टकऱ्यांची हातातील काम गेल्याने होणारी प्रचंड

शारीरिक, आर्थिक व मानसिक कुचंबणा व हजारो किलोमीटरची उपाशी व उन्हातान्हात मुला-बाळांसहीत घराच्या ओढीने होणाऱ्या स्थलांतरातून, होणारे हाल, आजारपण, मृत्यू ही कुचंबणा हृदय पिळवटून टाकणारी आहे. राजस्थानात कामगारांच्या प्रश्नावर काम करणाऱ्या उदयपूर येथील 'आजिविका' या संस्थेने १ मे २०२० रोजी आपल्या "http://www.aajeevika.org" या संकेतस्थळावर 'अनकिलींग द अर्बन : रीडमॅजनिंग मायग्रंट लाईव्हज् इन सिटीज पोस्ट कोव्हिड-१९' या शीर्षकाचा अहवाल नुकताच प्रसिद्ध केला आहे. त्यात राजस्थान व देशभरातून गुजरातमधील अहमदाबाद व सूरत या दोन शहरात येणाऱ्या जवळपास ४५० मजुरांच्या मुलाखतपर संशोधनावर आधारित हा अभ्यास आहे. उद्योग, व्यवसाय स्नेही राज्य म्हणून गुजरातची ओळख 'व्हायब्रन्ट गुजरात' नावाने जगभर फसवली जात असताना या राज्यातील कामगारांचे शोषण व जगण्यातील कुचंबणा करणारा अहमदाबाद व सुरतेचा बदसुरत चेहरा या अहवालाने जगासमोर आला आहे. एकट्या सुरतेतील ५० लाख मजुरांपैकी २५ लाख मजूर स्थलांतरीत आहेत. ओरिसा, झारखंड व राजस्थान मधून लाखो मजूर पोट भरण्यासाठी गुजरात व महाराष्ट्रातील अहमदाबाद, सुरत, मुंबई, पुणे या शहरांमध्ये आले आहेत. त्यांच्या निवासाची या भांडवलदार मालकांकडून कुठलीही व्यवस्था नाही. कामाच्या निश्चित वेळेची व मिळणाऱ्या वेतनाची शाश्वती नाही. कामावर अपघात, आजार झाल्यास आरोग्य सुविधा नाही. यादीत नाव नसल्याने शासकीय यंत्रणेतील कुठलाही लाभ नाही. अशा लाखो असंघटित कुशल-अकुशल कामगारांच्या प्रचंड श्रमावर व घामावर वरील उद्योगांची केंद्र म्हणून ओळखली जाणारी महानगरी व राज्ये आणि त्यांची आर्थिक साम्राज्य पोसले जात आहे. कोरोनाोत्तर टाळेबंदीने या शोषित, वंचीत, अशिक्षित कामगार वर्गाच्या या समस्या व प्रश्नांच्या सोडवणुकीची जबाबदारी कोणाची याबाबत मालक, भांडवलदार व शासन आपली जबाबदारी परस्परांवर झटकून व थारु-मातूर उपाययोजना करून मोकळे झाले आहे. नव्या उद्योग रचनेत कामगारांच्या जबाबदारीबाबत अदृश्य होण्याची व आर्थिक लाभ उठवण्यापुरते हजर होण्याची सोय भांडवलदार धार्जिण्या व कामगारांच्या जगण्याशी देणे-घेणे नसलेल्या केंद्र व राज्य सरकारांनी नफेखोर मालकांना, कारखानदारांना उपलब्ध करून दिले आहे. त्यामुळे कामगारांचे जगणे अधांतरी बनले असून ते नव्या नफेखोर उद्योग रचनेत केवळ श्रमकरी साधन बनले आहेत.

आज भारतात वर्षभर म्हणजे दहा-अकरा महिने पशुप्रमाणे किड्या-मुंग्याचे जीवन जगत पोटाची खळगी भरणारे खरे तर केवळ 'जिवंत' राहणारे ७ ते १० कोटी असंघटित कामगार-मजूर आहेत. कोव्हिड-१९ व टाळेबंदीने केवळ त्यांचे हे

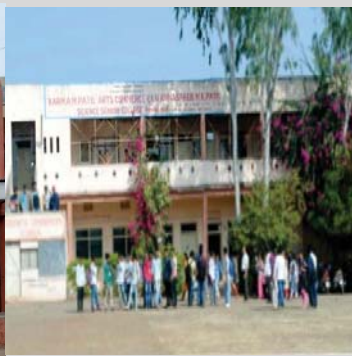
जगणे २०२० मध्ये महासत्ता बनण्याचे स्वप्न पाहणाऱ्या भारतातील सत्ताधारी, प्रस्थापित व मध्यमवर्गीयांच्या दृष्टीस तरी आले आहे. या मजुरांना न्याय्य व सामान्य जगणे नाकारणाऱ्या व्यवस्थेत बदल करणे समाजाच्या व सर्वार्थाने सत्ताधाऱ्यांच्या संवेदनशीलतेवर अवलंबून आहे. राष्ट्र उभारणीत व अर्थउद्योगाच्या जडण-घडणीत मोलाची भूमिका बजावणाऱ्या या असंघटित, असहाय्य व पोटाच्या प्रश्नात अडकलेल्या, मरणासन्न व अमानुष आयुष्य जगणाऱ्या या कामगारांचे प्रश्न शाश्वतपणे व कायमस्वरूपी सोडविण्यासाठी अधिकृत, कायदेशीर, पुरेशा, उचित व सातत्यपूर्ण प्रयत्न करणाऱ्या व ही आपली आद्य जबाबदारी किंवा कर्तव्य मानणाऱ्या मार्क्स व तत्सम नाहीरे वर्गाच्या किमान माणूस म्हणून जगण्याची हमी मिळवून देणे हे शासनाचे आद्य कर्तव्य मानणाऱ्या विचारांचे लोक/पक्ष सत्तास्थानी येणे ही काळाची गरज बनली आहे. या वाईट परिस्थितीत केंद्र सरकार व त्यांचे प्रमुख सत्ताधारी कामगारांवर अन्याय करू नका, वेतन कापू नका, कामावरून काढू नका अशी कामगारांविषयी वरवरची तळमळ दाखवणारी सल्ले वजा पत्रके तोंडदेखली काढली जात आहेत. परंतु कृतीशिलतेच्या पातळीवर देशातील कामगारांच्या ९३ टक्के असलेल्या असंघटित कामगार वर्गाच्या शोकात्मक जगणे व यातना कमी करण्यासाठी कुठलेही चिरंतन प्रयत्न व उपाय तर सरकारकडून होत नाही तर परंतु आहेत ते कामगार हिताचे व पर्यावरण विषयक कायदे रद्द करून किंवा शिथिल करून कामगारांचे सुरक्षा कवच काढून भांडवलदारांना रोजगार निर्मितीच्या नावाखाली पुन्हा कामगारांच्या शोषणाचे नवे परवानेच बहाल केले जात आहेत. याची सुरुवात म्हणून गुजरात, उत्तरप्रदेश, मध्यप्रदेश या सारख्या राज्यात कामगार कायदे तीन वर्षासाठी रद्द करून त्याची सुरुवातही केली आहे व केंद्र सरकारची वाटचालही त्याच दिशेने सुरु आहे. ही बाब देशातील शोषित, वंचीत, असंघटित कामगारांचे जीवन विश्वच उद्ध्वस्त करणारी असून लोकशाहीची व मानवतेची कुचंबणा आहे. समाजातील परिघावरील घटकांना परिघाबाहेर लोटण्याचे आधीच सुरु असलेले प्रयत्न अधिक वेगवान बनले असून श्रम मंत्रालयाच्या व पर्यावरण मंत्रालयाच्या माध्यमातून कामगार व श्रमिक कायद्यात तसेच पर्यावरणविषयक कायद्यात कामगार विरोधी व भांडवलदार धार्जिणे बदल केले जात असून पर्यावरण संरक्षणाला नख लावले जात आहे. या संकटकाळात विरोधकांनी राजकारण करू नये म्हणणारे सत्ताधारी सरकारने नागरीकत्व कायद्यातील अन्याय्य बदलाविरोधात लढणाऱ्या शाहिन बागेतील एक-एक महिलांना व नागरीकांना तुरुंगात टाकले जात आहे. अशा स्थितीतही आपले लोकशाहीला सुरुंग लावण्याचे राजकारण सरकारने सुरुच ठेवले आहे. या भयानक गंभीर परिस्थितीला सजग नागरीक, राजकीय पक्ष,

सामाजिक संस्था व विरोधी पक्षांनी व्यापक समाजहित लक्षात घेवून धिरोदात्तपणे सामोरे जावून 'दूध का दूध, पानी का पानी' करणे आवश्यक आहे. कोरोना व टाळेबंदीच्या या अस्थिर व गोंधळलेल्या वातावरणात नागरीकांनी सरकारला डोळे झाकून व अमर्याद अधिकार बहाल न करता संवेदनशिल व जागरूक नागरीक, सामाजिक संस्था, संघटनांनी व विरोधी पक्षांनी जागल्याची भुमिका निभावत सर्वसामान्यांची समज वाढविणे आवश्यक आहे.

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