

Compare the Vital Concepts of Mother of All Pandemic Spanish Flu and COVID-19: A Promising Review

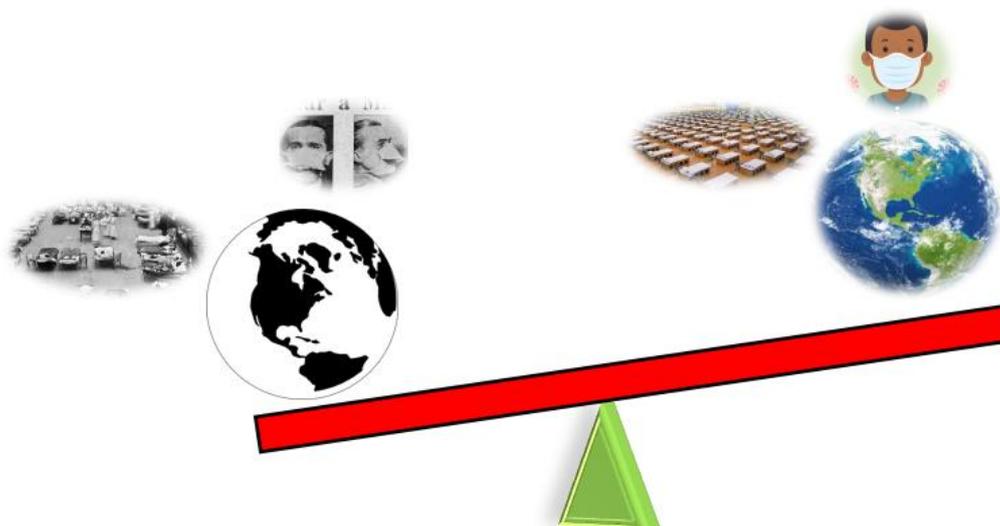
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Abstract: In every century, few invisible infectious diseases create an alarm to the entire world and which leads to extermination of the population. In 1918 and 2019, the world has tackled truculent diseases such as mother of all pandemic Spanish flu and COVID 19. The mortality rate of Spanish flu was greater than in the first world war. After 100 years' same history was repeated in 2019 through COVID 19. Suddenly a huge number of pneumonia cases were reported in the end of 2019 in Wuhan, China. These two outbreaks make medical, social and financial burden to the entire world. This kind of sudden pandemic breaks mental health and creates panic, anxiety and depression. Pharmaceutical preventive measures are not supported during both pandemics which was rectified by non-pharmaceutical preventive steps like lockdown, quarantine, wearing facemask and gloves, washing hands and applying sanitizer, follow the social distancing, closing cinema hall and schools, avoiding mass gathering in 1918 and 2019-2020. The main objective of this review is to compare and summarize the concepts of both pandemics and how the people of the world need to come together and fight against common enemies, to warrant that we have the best scientific resources necessary to bring this outbreak to an end.

Keywords: COVID 19, Lock down, Pandemic, Quarantine, Death rate, Spanish flu

Graphical Abstract :**1. INTRODUCTION**

Before March 1918 and December 2019, the whole world was unknown and remote from two threatening pandemics such as Spanish Influenza and novel COVID 19. In World War I, Influenza pandemic is one of the biggest painstaking lethal sickness outbreaks recorded in 1918 in every corner of the globe. Austerity of disease was more; it is known as mother of all pandemic or Spanish flu for the reason that Spain had stick at unbiased during the battle of war and generously conveyed news update of Spanish flu bustle.¹ After a period of 100years, abruptly the pandemic was repeated in history.

Last months of 2019, sequence of cases of enigmatic basis occurred in China (Wuhan).² After some days, severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) were identified and witnessed as connective agent for novel pneumonia cluster in January 2020.³ Director-General of World Health Organization (WHO) named & acknowledged the infection produced by SARS-CoV-2 as “COVID-19” on February, 2020. Almost, 114 countries affected with this infection, more than 118,000 cases identified and 4000 deaths occurred.⁴ This potential review aims to compare, summarize and make common man understanding about origin, transmission, prevalence, morbidity, mortality, preventive measures and health care guidelines to be taken to overcome during Spanish flu and ongoing COVID-19 pandemic.

2. HISTORY OF SPANISH FLU

During the period of I World war, American army had experienced both battle and influenza epidemic. The war spread influenza in the overcrowded circumstances of army campgrounds in the United States & ditches of Europe Western Front. In the month of March, 1918, a cook Albert Gitchel at Camp Fuston in Kansas, he was troubled by fever, coughing, headaches. In the history of Spanish flu, He was only the initial predictable case. During the First World War, Europe was demolished and Spain as an unprejudiced republic had every time to pact with the sickness and its values and assert the name. Spain circulated a more number of trusty

scientific proofs for the infection, plentiful the whole community the false impression that Spain was the extreme pretentious region. The flu had journeyed with military forces in the entire France and from there to the rest of Europe, ultimate it's hoop in the USA.⁵⁻⁷

Thousands of new cases were reported and 1100 soldiers had been hospitalized within 3 weeks.⁸ Nearly within two weeks, which was spread over North America at that moment spread unevenly distributed in around 6 months through the United States, Europe and Asia, spreading quickly due to close quarters and bulk troop travels. This was the “first wave” initiating slighter sickness than the further waves that pursued.⁹ The second wave of flu appeared near Boston at U.S. Camp Devens in September 1918, this was the lethal wave, with over 190,000 Americans died in October only. The U.S. arranged a huge number of nurses to soldierly camps, only to experience a severe nonexistence of professional nurses in the common community.¹⁰ Educational programs were organized for public health officials to learn about the dangers of coughing and sneezing, debating the insensitive discarding of nasal discharges. The third and final wave started in 1919 and sustained up to spring. The epidemic in the U.S. finally diminished in the summer of 1919.^{11,12}

In the spring of 1918, the first pandemic wave started moderately mild symptoms and began little expiries. Later in the commencement of the summertime, infection reappeared in vastly infectious mode and instigated 10 millions of bereavements all over universe for the period of the second wave in the end months of 1918. During, primary months of 1919, a third wave arisen, similarly in charge for extensive mortality even though a final wave, while not constantly recognized, feast throughout the 1920 initial months.^{1,13} Disease and war have been linked during the history as human infections and weapons have met on the battlefield. During 1918, United States Military and Armed Forces Aesculapius officers and army crossed the worst epidemic in American history. A Navy Surgeon, General William C. Braisted, conceitedly specified that transmittable diseases that earlier carried off their thousands like yellow fever, typhoid, typhus and cholera, have all generated to our contemporary facts of their sources and our subsequent rationale procedures implemented for prevention.¹⁴

Military and Navy medical services may be having typhoid and typhus, many of U.S. soldiers, Marines & sailors are affected by influenza virus and pneumonia yet death on battleground. A story of influenza epidemic in the army and an investigation of medical stories also part of the Marines official papers start the fighting disclosed that the fighting and the pandemic exist intertwined.¹⁵ Spanish flu smash into over all Military, apart from greatest sickness percentage was identified U.S. Army 26% of the disease sickened, over one million men.^{12,15,16} Totally 700 000 influenza cases was recorded in German Military, and 1918 in France 313 000 listed cases in British Expeditionary Forces .¹⁵ The scientific communities had struggled to establish latest speculation also appealed the prohibition, treatment & diagnostics to influenza virus cases. Absolutely, preventive measures taken were to say at least insufficient. The key factor of occurrence of worldwide influenza was increased logistics improvement due to contemporary conveyance systems that made laid-back for soldiers, sailors and civilian population to catch the disease speedily to every angle of occupant areas.¹⁷

3. CORONA VIRUS

Coronaviruses having RNA genome with single-stranded, protected by surrounded structure¹⁸ Coronaviridae family in order of *Nidovirales*.^{19,20} They are *Alpha coronavirus*, *Beta coronavirus*, *Gamma coronavirus*, and *Delta coronavirus* divided in four genera. The is pleomorphic otherwise spherical shape, also glycoprotein surface is bears club-shaped projections was characterized (diameter range 80–120 nm).¹⁸ compared to all RNA viruses, highest one RNA genome of CoV, also CoV genome having six to ten numbers of open reading frames (ORFs).²¹ The transmembrane (M) glycoprotein, the spike (S) glycoprotein & the envelope (E) protein are present in viral membrane, and flexible or disordered surrounds, possibly helical, nucleocapsid.^{22,23} They have abnormally thick viral membrane, possibly the M protein forms an additional internal layer from carboxy-terminal region, as exposed through cryo-electron tomography.²²

Understanding the virology origins of coronaviruses and restricting their proliferation have important implications for global health and economic stability. CoVs are a significant infectious agent for humans and animals. They are infecting human's respiratory system, gastrointestinal system, hepatic, and central nervous system, also birds, mouse, and all other wild animals.²⁴⁻²⁶ at 2002/2003 severe acute respiratory syndrome was outbreaks and 2012 also Middle East respiratory syndrome confirmed the chance of animal-to-human and human-to-human spread of newly rising coronaviruses.^{27,28} An December 2019 outbreak of unknown pneumonia in Wuhan has been drawing huge attention around the world wide.

CURRENT SCENARIO OF COVID 19

At least 60 novel bat coronaviruses were identified through Molecular surveillance studies in China²⁹ and North America,³⁰ Europe^{31,32} also Africa.³³ These bat coronaviruses may have raised from an ordinary source and then next diverge as they adapted to development in various species of bat; they are nowadays distantly linked to other CoVs. Most of the bat coronaviruses be the gene resource of alpha - coronaviruses & beta - coronaviruses, at the same time as the majority of the bird coronaviruses are the gene resource of gamma-coronaviruses & delta- coronaviruses this all are reported in studies. The pandemic evolved in China towards the end of 2019 and COVID 19 started to spread all over the globe like a typical wildfire capturing over 190 countries.³⁴

Live animal retail (wet) markets transmission has occurred, everywhere animal handlers become contaminated. Looking back, in wet markets variants of coronavirus related to the epidemic strain infected in human populations fairly frequently, in animal handlers who did not develop SARS-like illnesses it shown by the high seropositivity rate.³⁵ On 2019 December 31st capital of Hubei province Wuhan in China reported the first cases of atypical pneumonia. The causative virus identified to be Beta coronavirus, and similar to Sarbeco Viruses isolated from bats its closely related to severe acute respiratory syndrome coronavirus from 2003.^{36,37} As a result term SARS-CoV-2 also disease it causes be named COVID-19.³⁸

The pandemic begins at what time a doctor who be treat personnel in the wet markets become contaminated and consequently infected various contacts.³⁹ On January 7, 2020 Chinese authorities announced a new type of Coronavirus was isolated.⁴⁰ World Health Organization in January 12, 2020 this virus was named as Novel Coronavirus and 11 February 2020 named as COVID-19. Globally 43.103 confirmed cases and 1.018 deaths have been announced on 12 February 2020.⁴¹ as given wherever first case originates, the virus was transmitted possibly as from animal to human. In Wuhan city, the increased number of cases worldwide after closing the marketplace and removal of cases in China, has indicated a next transmission from people-to- people. Primarily in other Asian countries than many countries such as the trans-oceanic united states of America and France New cases were identified. On January 17 and February 23 in 2003 in between the period of the Spring Festival of China, when the severe acute respiratory syndrome pandemic peaked, at January 10 and February 18 in 2020 while the period of the festival likewise, COVID-19 cases rapidly increased in between January 10-22.

During the 2020 spring festival time the number of travelers was raised 1.7 folds in 2003 the number traveled compared and reached to 3.11 billion from 1.82 billion. This big-size travel interchange has also produced favorable environments for the increase of this hard-to-manage virus.⁴² In current study, it was observed to novel virus because pandemic coincides with the CoV isolated in bats. First cases appeared from Huanan Seafood's Market being there of wild animal trade, supports this discovering.^{43,44} Secondary cases were reported when the first epidemic, after around ten days. Additionally, as these novel patients don't have contact with the marketplace, they are having a history of interacting with humans.

Healthcare workers in Wuhan confirm that people-to-people transmission can occur, recent reports also confirmed. In the past like SARS and MERS epidemics, people-to-people transmission has accelerated the increase of the outbreak and China's other states also started to report cases. On January 13, 2020 in Thailand the first non-Chinese case of the infection, which extends to the Chinese province, and Asian continent also spread. This case report being a Chinese traveler who has traveled to Thailand and don't have any epidemiologic link with the marketplace.⁴⁵

The United States of America and France oversea countries cases are continuously reporeted.⁴⁶ frequently, the people-to-people transmission occurs with close up contact. The transmission principally occurs when a contaminated individual sneezes and throughout the respiratory droplets created just a spread of virus also respiratory pathogens. These types of droplets can stay in the mouth and nasal mucosa, lungs of humans with inhale atmospheres. Presently, it leftovers indistinct whether anyone can be contaminated by Coronavirus by touching a contaminated surface or objective and after that touching their mouth and nose, or probably eyes.⁴⁷ Usually, similar to respiratory viruses, it's considered the most infectious when humans are most indicative. Research is ongoing but sufficient data are not available on infectiousness of the disease.⁴⁸

4. PREVENTIVE MEASURES

In 1918-1919 influenza pandemic was the utmost lethal spreadable tragedy in human history. Around forty million people expired worldwide.⁴⁹⁻⁵² The past historical record proves that many individuals, communities and nations faced distressing pandemic and they adopted to perceive to follow the non-pharmaceutical measures such as social distancing, quarantine and isolation of those who are not well, closing of schools, business places, cinema theatres, and public gatherings.^{53,54} Many policy makers of influenza pandemic agreed that non-pharmaceutical interventions only support and prevent the populations from life susceptibility to the epidemic virus. This non-pharmaceutical preventive measures play a hygienic role in shelving the time-based effect of pandemic, decreasing the overall and highest frequency and plummeting the number of collective deaths.⁵⁵⁻⁵⁹ During 1918, the significance of home quarantine and isolation measures was established very clearly.⁶⁰

Quarantine is one of the most effective and oldest implements of controlling and preventing contagious sickness eruptions. Quarantine is the separation of sickness or septic individuals from others to avert the feast of septicity or contagion. Looking at the literature many studies states that the quarantine is the most operative method in dropping both the number of infested and deceased.^{61,62} World Health Organization in 2020, suggest that communication of patients with laboratory-confirmed COVID-19 be quarantined for 14 days from the last time they were reveal to the patient.⁶³ For the purpose of executing quarantine, a contact is a person who is involved in any of the following from 2 days before and up to 14 days after the start of symptoms in the patient.

Meeting face-to-face communication with a COVID-19 patient within 1 meter and for >15 min, · Providing straight care for patients with COVID-19 disease without using appropriate personal preventive equipment, staying in the same close atmosphere as a COVID-19 patient (including sharing a workplace, classroom or household or being at the same assembling) for any amount of time, travelling in closeness with (that is, within 1 m separation from) a COVID-19 patient in any kind of conveyance. Active Tracking of people who are quarantined is one of the main points for controlling the epidemic in the populations.

Interacting with people such as bedside tables and door handles should be disinfected daily with ordinary household disinfectant containing a modified bleach solution (that is, 1-part bleach to 99 parts water). For surfaces that unable to clean with bleach, 70% ethanol can be used. Toilets and bathrooms should be cleaned and disinfected with a modified bleach solution (one-part bleach to 9 parts water to make a 0.5% sodium hypochlorite solution). Throw away gloves should be used when cleaning or handling surfaces, clothing, or linen soiled with body fluids. All used throw away contaminated items should be placed in a lined container before disposing of them with other household waste. Clothes, bed linens, and bath and hand towels should have cleaned using ordinary laundry soap and water or machine washed at 60–90°C with usual laundry detergent. Throw away gloves should be used when cleaning or handling surfaces, clothing, or linen soiled with body fluids

All one use contaminated items should be placed in a lined container before throwaway of them with other household waste. All ministries announced general instructions on COVID-

19 prevention and control measures in their organizations.⁶⁴ Social distancing is planned to reduce interconnection between people in a broader community, in which individuals may be infectious but unable to be identified hence not yet isolated.⁶⁵ One of the high-risk factors for COVID-19 transmission was Workplaces. Therefore, home office working must be encouraged if possible. In workplaces where home office working is not possible, adherence to suggestions of World Health Organization remains quite important.⁶⁶ Studies have been conducted that support the infectiousness of SARS-CoV-2 in the presymptomatic stage; social distancing is thus of critical importance in creating control over the pandemic.⁶⁷

The full or incomplete closure of educational institutions and workplaces, Controlling the number of visitors and controlling the contact between the residents of confined settings, such as long-term care facilities and prisons, avoidance, banning and restriction of mass gatherings and smaller meetings, Compulsory quarantine of buildings or residential areas, Internal or external border closures, and Stay-at-home limitations for entire regions or countries. To narrow COVID-19 transmission from potentially asymptomatic or presymptomatic people, the European Centre for Disease Prevention and Control recommends the use of face masks.⁶⁸ The use of face masks in the society may primarily serve as a means of source control. This measure can be especially relevant in epidemic situations when the number of asymptomatic but infectious persons in the society can be assumed to be high. Wearing a face mask could be considered, particularly when visiting busy, closed spaces, such as grocery stores, shopping centers etc., when using public transport and for certain workplaces and professions that involve physical proximity to many other people (such as members of the police force, cashiers – if not behind a glass partition, etc.) and when teleworking is not possible. In the United States, the CDC updated its recommendations in early April to advise individuals to wear a cloth face covering (i.e., homemade masks or bandanas) when in public settings where social distancing is difficult to achieve, particularly in areas with substantial society transmission.⁶⁹

Banning of generalized use of masks by the World Health Organization is often criticized by some researchers. However, using a surgical mask for COVID-19 patients, their caretaker and health care workers (HCW) is well excepted.⁷⁰ Using an N95 mask or respirators is only restricted to any procedures like bronchoscopy, tracheostomy, manual ventilation, collection of respiratory samples or during other aerosol generating procedures.⁷¹

Hand is a main vehicle to transfer SARS-CoV-2. Recurrent touching of mouth, nose or eye could recklessly bring the virus in contact with the mucosal surfaces. Hence the most important measure to control the spread of COVID-19 infection is frequent hand wash with soap and water or with an alcohol based hand sanitizer. If hands are not visibly dirty they should preferably have washed with alcohol based sanitizer for 20 to 30 seconds.⁷² However, if hands are visibly dirty they must wash with soap and water for 40 to 60 seconds with an appropriate protocol.⁷³ Hand wash can save a person from contracting this highly infectious virus and next spread to others

Droplet precaution refers to prevention of large droplet transmission of respiratory viruses. As air droplets seldom cross beyond 1 meter, performing any work on patients near within 1

meter, all health care workers must wear medical/ surgical masks along with face shields or goggles to safeguard the eye from accidental spitting from patients.

Communication precaution prevents direct or indirect transmission from contaminated surface, fomites or instruments. Personal protective equipment includes masks, gloves, gown, and goggles are necessary to prevent infection to healthcare workers. Dedicated instruments (stethoscope, thermometer) should be used for each patient however in case of sharing each instrument must be disinfected with alcohol or hypochlorite solution. Health care workers must ignore touching their mouth, nose or eye, frequent hand wash and a proper training on donning and doffing of Personal protective equipment is very important to prevent the extent of infection among them.

5. ECONOMIC BATTLE DURING PANDEMIC

At first, the perception was that the COVID-19 pandemic would be localized in China only. It recently spread across the world through the motion of people. The economic pain became serious as people were asked to stay at home, and the severity was felt in different sectors of the economy with travel bans trouble the aviation industry, sporting event cancellations troubling the sports industry, the banning of mass gatherings troubling the events and entertainment industries.⁷⁴ The unexpected economic interference caused by COVID-19 is not only devastating but also has spillover implications because it created requirement and supply shocks in almost every region of human endeavor.⁷⁵

The travel limitations imposed by governments later led to the trimming in the demand for all forms of travel which pressure some airlines to temporarily suspend functions such as Air Baltic, LOT Polish Airlines, La Compagnie, and Scandinavian Airlines. Such travel limitations cost the tourism industry alone a loss of over \$200 billion worldwide, accepting other loss of revenue for tourism travel, and were forecast to cost the aviation industry a total loss of \$113 billion according to the International Air Transport Association. 8 US airlines sought a \$50bn bailout fund for the US Airline industry alone. 9 The GTBA reported that the business travel sector would lose \$820 billion in revenue due to the COVID-19 pandemic.⁷⁶

Eatery businesses have been affected during the COVID-19 pandemic mainly through the government declared stay-at-home and social distancing movement limitations forced by the government in many countries. This led to quick shutdowns in cities and states to control the spread of the COVID-19, which threw many eateries and hotels across the country into unexpected shock. Hotels across the world witnessed booking cancellations worth billions of dollars, and the hotel industry sought a \$150bn bailout.⁷⁷ Eatery executives laid off staff as they shut down their businesses provisionally. Many customers stayed at home, choosing to eat cooked meals at home. Some eatery executives criticized the government for imposing the stay-at-home and social distancing scheme which destroyed many small eatery and pub businesses in small cities

The sports industry was seriously affected during the COVID-19 outbreak. In the football segment, major European football leagues in England and Scotland declared the sudden postponement of football matches for 6 weeks until 30th April. The Turkish super league was

the last major European league to postpone its matches. In Formula One, the Monaco Grand Prix was cancelled. The Tokyo Summer Olympic and Paralympics games were also suspended. Beginning of 2020, the price of oil fell due to the oil price war between Russia and Saudi Arabia. The COVID-19 pandemic aggravated the situation through the reduction in the demand for oil. The imposed travel regulations during the pandemic, which led to a limitation in the movement of people and goods, resulted in a fall in requirement for aviation fuel, coal and other energy products, which later led to a fall in oil price due to low requirement. The COVID-19 crisis also affected an extensive energy market such as the coal, gas and renewable energy markets, but its impact on oil markets was more severe because it stopped the transport and goods, which led to a drastic decline in the requirement for transport fuels.

The global economic slowdown led to a rise in irrecoverable loans in the banking sector by 250 basis points. Privatized sector banks had the highest exposure to credit risk during the outbreak. 14 irrecoverable loans arose from loans issued to small and medium scale enterprises, airlines, hotels, tour operators, restaurants, retail, construction and real estate businesses. During the pandemic, there was a general decline in the volume of bank transactions, a decline in card payments and a fall in the use of ATM cash machines globally. Previous to 2020, the event sector contributed remarkably to the economy. In 2018, for instance, business events hosted more than 1.5 billion contributors across more than 180 countries (Oxford Economics).⁷⁷ The events industry created more than \$1.07 trillion of direct spending; representing spending to plan business events, produce business events, business events-related travel, and direct spending by exhibitors. The industry also created 10.3 million direct jobs globally and created \$621.4 billion of direct Gross domestic product.⁷⁸

The worldwide film industries suffer a \$5 billion loss during the COVID-19 outbreak. Various Hollywood movie productions were rescheduling indefinitely which meant goodbye to theatre and cinema. The global Alliance of Theatrical Stage Employees (IATSE) reported that an estimated 120,000 below-the-line entertainment industry jobs were lost due to the COVID-19 pandemic, most of which were theatrical stage employees. The pandemic shutdown resulted in the loss of 120,000 jobs held by its 150,000 members, and the Theatrical Stage Employees advocated that the entertainment industry should be included in the planned combined stimulus package. In Italy, the COVID-19 outbreak severely affected the entertainment industry which incurred losses approximately to run into the millions of euros per week: from February 23 to March 1, 2020. There were approximate losses of 7.3million euros in the film screening sector, 7.2million euros in the theater section, 4.1million euros in the live music section, 2.5 million euros in the dance activities section and 1.8 million euros in the exhibition section.⁷⁹ In the UK18, an approximate 50,000 industry freelancers were expected to lose their jobs as a result of the COVID-19 pandemic according to BECTU (Broadcasting, Entertainment, Communications and Theatre Union). simultaneously, unemployment levels in the entertainment industry rose to unprecedented highs, and yet there were doubts as to whether the entertainment industry would receive part of the planned combined stimulus package as many lawmakers argued that the entertainment

industry was not a main driver of the economy, and some argued that the entertainment industry does not contribute much to economic activities compared to the financial and manufacturing departments.

In various countries, the services of public hospitals grew in high demand but the most of the testing equipment was in private hospitals. China provisionally closed all hospitals in the central city of Wuhan, the epicenter of a COVID-19 outbreak. Iran's hospitals fight to cope with the COVID-19 outbreak. In Spain, the Spanish government nationalized all private hospitals and healthcare providers as the virus was spreading very quickly. Singapore had sufficient healthcare facilities and workers to cope with the growing number of COVID-19 patients and private hospitals were inviting and accepting foreign COVID-19 patients.

6. STRESS AND DEPRESSION DURING PANDEMIC

During the influenza A virus (H1N1) epidemic, anxiety reached the highest point at the peak of the epidemic and reduced with its decline.⁸⁰ The disclosure of COVID-19, with its rapid spread, has aggravated anxiety in population's worldwide, leading to mental health disorders in personals. This has even caused cases of stereotyping and discrimination.^{81,82} According to our Nader Salari1 analysis, the prevalence of stress, anxiety, and depression, as a result of the pandemic in the general population, are 29.6, 31.9 and 33.7% respectively.

Proof suggests that individuals may experience symptoms of psychosis, anxiety, trauma, suicidal thoughts, and panic attacks.^{83,84} Current studies have similarly shown that COVID-19 affects mental health outcomes such as anxiety, depression, and post-traumatic stress symptoms.⁸⁵⁻⁸⁷ COVID-19 is novel and unexplored, and its rapid transmission, its high mortality rate, and concerns about the future can be the causes of anxiety.⁸⁸ Anxiety, when above normal, weakens body's immune system and accordingly increases the risk of contracting the virus. Research shows that people who follow COVID-19 news the most, experience more anxiety.⁸³ Most of the news published on COVID-19 are distressing, and sometimes news is associated with rumors, which is why anxiety levels rise when a person is constantly exposed to COVID-19 news.⁸⁹ Misinformation and fabricated reports about COVID-19 can exacerbate depressive symptoms in the world wide.⁹⁰

In this regard, mental health professionals suggested promoting healthy behaviors, avoiding exposure to negative news, and using replacement communication methods such as social networks and digital transmission platforms to prevent social isolation.⁸⁸ Such conditions are even more notable for populations with poorer health conditions. In the underdeveloped and developing countries the epidemic conditions of COVID-19 impose greater psychological effects on the population, given that these countries are also affected by many other infectious diseases. Uncertainty about health status, follow-up of patients, treatment care, and inefficiency in these communities can also increase the vulnerability of such communities to the psychological effects of COVID-19.^{89,91}

The judgements of epidemiological studies show that women are at a higher risk of depression.⁹² Women are more at risk to stress and post-traumatic stress disorder than men.⁹³ In current studies, the pervasiveness of anxiety and depression and stress during COVID-19

pandemic is shown to be higher in women than in men.^{89,90,94,87} Some researchers have justified that a higher anxiety among young people may be due to their greater access to information through social media, which can also cause stress.⁹⁵ During the COVID-19 pandemic, people with higher levels of education had greater levels of anxiety, depression, and stress. According to recent studies, during the COVID-19 pandemic, there is an association between education levels, and anxiety and depression levels.^{87,89} In addition, anxiety levels are notably higher in people with at least one family member, relative, or a friend with the COVID-19 disease.^{86,89,96}

7. ONGOING INVESTIGATION ON COVID 19

Alike to MERS-CoV and SARS-CoV, there is still no particular antiviral treatment for COVID-19.⁹⁷ Isolation and supportive care including oxygen therapy, fluid management, and antibiotics treatment for secondary bacterial infections is suggested.⁹⁸ Some COVID-19 patients progressed quickly to ARDS and septic shock, which was eventually followed by multiple organ failure.^{99,100} Therefore, the efforts on initial management of COVID-19 must be addressed to the early recognition of the suspect and contain the disease expand by immediate isolation and infection control measures.¹⁰¹ Presently, no vaccination is available, but even if one was available, uptake might be suboptimal. A study of aim to vaccinate during the influenza A virus (H1N1) pandemic in the United States was around 50% at the start of the pandemic in May 2009 but had reduced to 16% by January 2010.¹⁰² Neither is a treatment available. Therefore, the management of the disease has been mostly helpful referring to the disease severity which has been introduced by the world health organization. If sepsis is identified, empiric antibiotics should be administered based on clinical diagnosis and local epidemiology and susceptibility information. Routine glucocorticoids administrations are not suggested to use unless there are another indication.¹⁰³ Clinical evidence also does not support corticosteroid treatment.¹⁰⁴ Use of intravenous immunoglobulin might help for severely ill patients.¹⁰⁰ Drugs are being evaluated in line with past investigations into therapeutic treatments for SARS and MERS.¹⁰⁵

Overall, there is not robust evidence that these antiviral can notably improve clinical outcomes. A. Antiviral drugs such as oseltamivir combined with empirical antibiotic treatment have also been used to treat COVID19 patients.⁹⁹ Remdesivir which was developed for Ebola virus, has been used to treat imported COVID-19 cases in US.¹⁰⁶ A brief report of treatment combination of Lopinavir/Ritonavir, Arbidol and ShufengJiedu Capsule (SFJDC), a traditional Chinese medicine, showed a clinical benefit to three of four COVID-19 patients.¹⁰⁷ There is an ongoing clinical trial evaluating the safety and efficacy of lopinavir-ritonavir and interferon-2b in patients with COVID19.⁹⁸ Ramsedivir, a broad spectrum antiviral has demonstrated in vitro and in vivo efficacy against SARS-CoV-2 and has also initiated its clinical trial.^{108,109} In addition, other potential drugs from existing antiviral agent have also been proposed.^{110,111}

8. CONCLUSION:

In every century, the world has crossed the different types of pandemic. We compared these two pandemics, restrictive preventive measures like social distancing, lockdown, isolation,

contact finding, stress free life style and quarantine of exposed had revealed the most efficient actions to control the disease spreading in both pandemic periods. The people of the world come together and fight against various invisible pandemics. This review will help the readers to understand the future directions that the global community should take to manage and mitigate the emergency.

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GRAPHICAL ABSTRACT

